

TECHNOLOGY DEPT.

Chilton's MOTOR AGE

SEPTEMBER 1953

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SEP 18 1953

DETROIT

FREE FOOTBALL
WITH
EVERY FALL
TUNE-UP



This Issue:

Chrysler V-8 Distributor Overhaul

Hook

**Tough but oh so
GENTLE**



TOUGH ON OIL-PUMPING, GENTLE ON CYLINDER WALL
Hastings gives you the famous Steel-Vent oil control with the right combination of companion rings to meet particular operating characteristics of each engine. Hastings gives you the set that's Motor Engineered replacement service exclusively and for all replacement service—re-bore, re-ring, re-sleeve.



It's gentle because Steel-Vent's two wall-contacting steel sections have rounded edges which provide hairline contact, reduce drag to a minimum.



It's gentle because Steel-Vent's flexible, low-tension innerspring works only against the steel sections—holds them on wall with soft pressure.



It's gentle because the Steel-Vent spacer has extra wide vents that allow oil flow through freely for extra cylinder wall lubrication.

**IN REGULAR OR
CHROME SETS FOR
ALL PASSENGER CARS**



HASTINGS

STEEL-VENT PISTON RING

● Hastings gives you complete coverage for all passenger cars—in regular and chrome sets—Motor Engineered for each make and type of engine, for every engine condition and operating need. Motor Engineered Sets for trucks, buses and tractors, too. Hastings Manufacturing Co., Hastings, Mich.; Hastings Ltd., Toronto. (Piston Rings, Spark Plugs, Oil Filters, Casite, Dron)



"Never had an engine leak with **PERMATEX** **FORM-A-GASKET**"[®]

says: — **ALBERT LINZ**, in charge of Engine Rebuilding,
Northeastern Auto Supply, Baltimore, Md.



"We use Permatex Aviation Form-A-Gasket on every gasket, joint, thread or connection on every engine we rebuild. We specialize in the rebuilding of racing and truck engines. We

just cannot take chances of having a leak in any engine we rebuild. Our experience and Permatex must be a good combination: We have never had a leak."

YOU CAN WIN

\$5.00

FOR YOUR SUGGESTION

We are giving away a flock of \$5.00 awards every month during 1953 for the best suggestions on the use of Form-A-Gasket. Tell us how you use it and how it helps you do a better job. It's easy to win. Write your suggestion on the official Form-A-Gasket Service Suggestion Blank, available through your jobber's salesman or counter man, Permatex representative who calls on you, or write us.



3 TYPES

FOR YOUR CONVENIENCE

No. 1 sets quickly, dries hard. No. 2 sets slowly, is non-hardening. No. 3 AVIATION is a brushable liquid that sets to a paste. All three make leakproof, pressure-tight seals in threaded, hose and flange connections.

PERMATEX COMPANY, INC.

Brooklyn 35, New York

Over 50 Chemical Products for Better
Automotive Maintenance.

Little boy with a BIG message

...for millions of motorists!



FOR YOUR FALL CHANGE

... see my dad !

... he's a Texaco Dealer. See him soon — let him get you set for safer, more enjoyable driving. He's just the man to give your car the fall checkup it should have:

✓ He'll drain and refill the crankcase with Advanced Custom Made **MAVOLT**, the extra heavy duty motor oil. Differential and transmission will also get superior Texaco lubricants.

✓ He'll lubricate the chassis with **Marfak** — to give you that cushiony feeling that lasts 1000 miles or more. His lubrication charts leave nothing to chance.

✓ He'll drain and refill your radiator — put in the correct amount of Texaco **P.F.**, the permanent type anti-freeze that stays P.F. all winter.

✓ He'll check your battery, tires, lights, fan belt, brake fluid, spark plugs — and other spots that might cause trouble.

And finally, he'll fill your tank with one of Texaco's **CLIMATE-CONTROLLED** gasolines: Sky Chief, the premium gasoline for those who want the best... or Fire Chief, the powerful gasoline that sells at regular prices.

You'll be ready for whatever winter brings — if you stop in soon and see your Texaco Dealer — the best friend your car has ever had.

THE TEXAS COMPANY
TEXACO DEALERS
in all 48 states

Texaco Products are also distributed in Canada and Latin America



Magazines, billboards and station promotion will carry this colorful, powerful fall-change message to the motorists of all 48 states. It's just one more example of how The Texas Company helps to keep business **BIG** for Texaco Dealers — everywhere!

THE TEXAS COMPANY

*No wonder **TEXACO DEALERS** are such busy dealers!*

Chilton's MOTOR AGE, SEPTEMBER, 1953

Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

Reg. U. S. Pat. Off.

For THE AUTOMOTIVE SERVICE INDUSTRY

LXXII, No. 10

September, 1953

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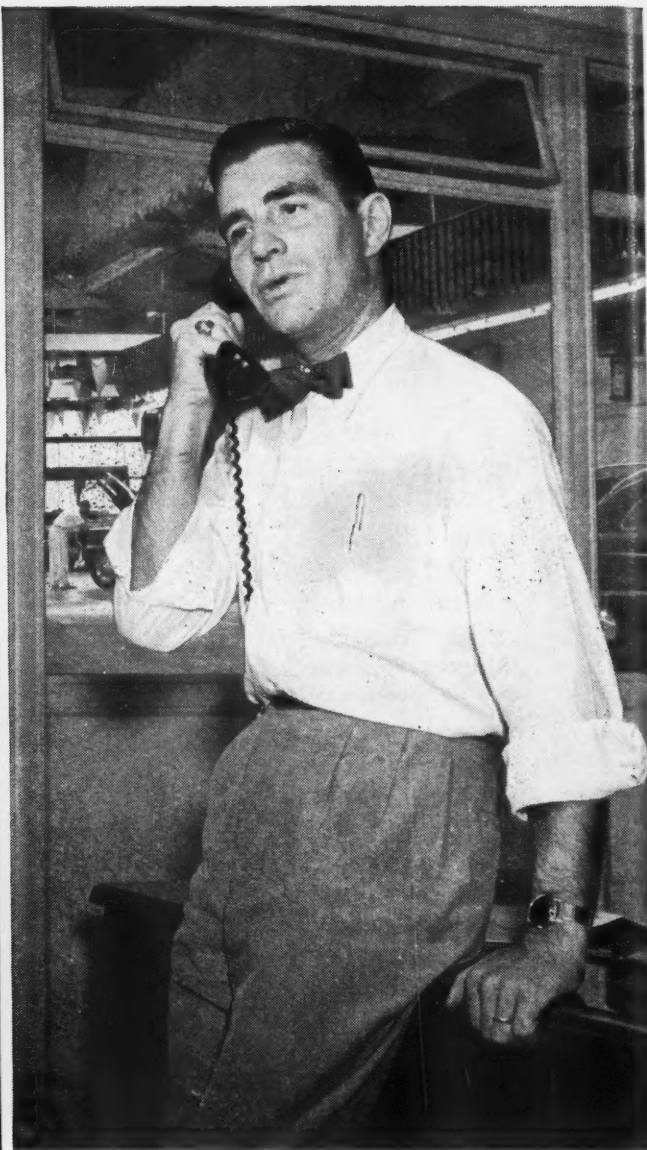
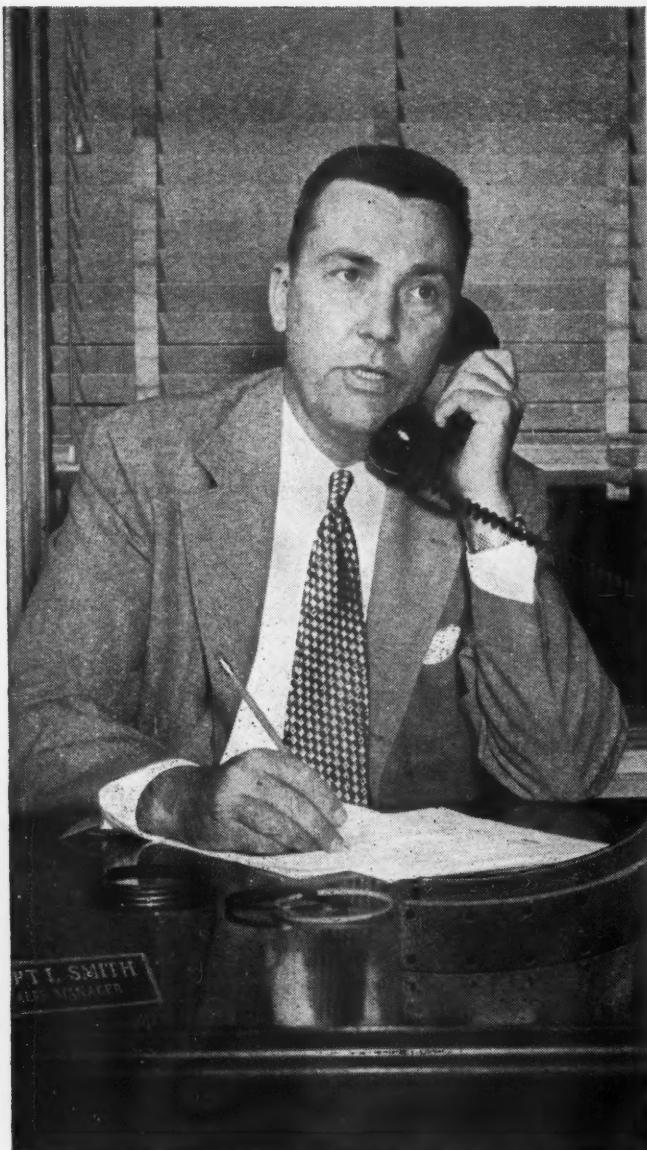
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"What do we do about 'Keep 'Em Rolling'?"

"That's a program that does a bang-up job for us, so we take off the brakes and really roll. We make special mailings. Talk about it in our regular advertising. Run small-space classified ads."

"Keep 'Em Rolling" — Farm Journal's editorial program devoted to better, more frequent maintenance—does a job for every automotive dealer who ties in with it. Why? It's as simple as one, two, three why this is so.

One: The biggest market for cars and service is Rural America. Most

of America's automotive dealers get most of their business there.

Two: In Rural America, Farm Journal is the largest selling — and most influential — magazine of all.

Three: When urging better maintenance, Farm Journal talks directly to your best customers — the owners of some 6,000,000 motor vehicles.

To benefit from the selling job which "Keep 'Em Rolling" does among your best customers and prospects, you've got to let people know you're cooperating with "Keep 'Em Rolling" and that you're

handling Farm Journal-advertised products. You can do this by postcard, by radio, by small-space classified advertising, or by your supplier's promotional programs.

Any time's a good time to start, but you will get an extra bonus in sales by tying in with the "Keep 'Em Rolling" issues. The next "Keep 'Em Rolling" feature appears in the October issue of Farm Journal, out September 14. Send right away for a list of the automotive products advertised in the October Farm Journal and for free display banners.



YOU GET WHAT YOU WANT FROM ADVERTISING IN FARM JOURNAL — the impact of the biggest magazine of all in America's biggest automotive market, with coverage along the rural routes like that of a local newspaper. If you've ever seen Farm Journal's County Analysis Folder for your territory, you'll know why. It tells you the number of farm families in your territory, how many of them subscribe to Farm Journal, the number of cars, trucks and tractors they own, their value as customers. For your free copy, write Dealer Service Department, Farm Journal, Philadelphia 5, Pa.

Farm Journal

WASHINGTON SQUARE, PHILA. 5, PA.
GRAHAM PATTERSON, PUBLISHER

Chilton's MOTOR AGE, SEPTEMBER, 1953

the chrome set that gives heavy duty service...



and seats
fast, too!



MOOG 241 chrome

PISTON RINGS

Engineered to seal—to seat—to outperform

Moog 241 Chrome Piston Rings were developed to meet the demand of expert motor repairmen for chrome long lasting wear but with *quick seating* features as well.

MOOG HAS BOTH—regular and chrome—the famous X-plus Full Power Set with metered oil control, and the 241 Chrome set that *Will Seat—Won't Scuff*.

HAVE YOU TRIED MOOG PISTON RINGS?

MOOG INDUSTRIES, INC., ST. LOUIS 14, MO.

Manufacturers of

COIL ACTION PARTS • LEAF SPRINGS • CHASSIS PARTS • COIL SPRINGS • PISTON RINGS



**WILL
SEAT-
WON'T
SCUFF**

© 1953 M.I.I.



Whatever your Engine
Bearing Needs may be...



You'll Find the Best
Answer in the
FEDERAL-MOGUL
PACKAGE!

FEDERAL-MOGUL SERVICE

(Division of Federal-Mogul Corporation)
DETROIT 13, MICHIGAN



Engine Bearings (Main, Connecting Rod and Camshaft) • Bushings • Connecting Rod Service—Exchange Insert Rods, Re-babbitted Rods • Connecting Rod Bolts and Nuts • V-Seam Piston Pin Bushings Shims and Shim Stock



You're ahead when
you plan ahead for
FALL MUFFLER BUSINESS

Stock up now with
MAREMONT

The line with the right design
... for every engine!



**SEE MAREMONT'S NEW
PROFITELLER**

Here's a unique "slide-rule" that instantly shows you the way to more muffler money. Ask your Maremont jobber salesman to show it to you!

Right 3 ways for you...

- **RIGHT DESIGN**—Important new Maremont design advancements meet the exhaust system demands of higher compression engines. Maremont Mufflers are *made right* for fast, easy installation... for better performance!
- **RIGHT MERCHANDISING**—Maremont shows you where and how to *spot* your "ready" customers with the proven "Sell 'em at the Lift" promotion. And Maremont's merchandising sales helps, like the *muffler and tail pipe display racks* and *muffler removal kit*, equip you *right* to do a real sales and service job. Ask your Maremont jobber salesman for them!
- **RIGHT PROFIT**—Maremont's right design and right merchandising assures you of the *right profit*. Muffler replacement is less than a 30 minute job the Maremont way. It's **GOOD** business when you sell Maremont... so *plan ahead*... stock up now!

And, remember to always Check 'em, Spot 'em and you'll Sell 'em at the Lift.

MAREMONT MUFFLERS

The right design... for every engine!

MAREMONT AUTOMOTIVE PRODUCTS, INC. Chicago 8, Illinois



TO THE TOP

R. A. STRANAHAN, President
F. D. STRANAHAN, Treasurer

CABLE ADDRESS:
"CHAMPION"

CHAMPION SPARK PLUG COMPANY

FELTHAM, ENGLAND PARIS, FRANCE WINDSOR, CANADA

TOLEDO 1, OHIO, U.S.A.

September 1, 1953.

Dear Champion Dealer:

As a dealer you know that Champion is the world's best spark plug -- to use and to sell. Champion's superiority is based on many exclusive features which are sales clinchers with your customers.

Let's take Champion's Sillment Seal, for instance:

Ordinary spark plugs use metal gaskets to stop leakage between insulator and shell. But metal gets tired - fatigued - and in time, these gaskets no longer expand and contract with pressure changes and the plug leaks gas that should be producing power in the combustion chamber.

To beat this problem Champion developed the Sillment Seal, a special powder tamped under high pressure between the insulator and shell and the insulator and the center electrode. This eliminates leakage throughout the service life of the plug and your customers are sure of continued operation within the plugs' proper heat range without overheating or power loss.

From time to time we'll remind you of other exclusive Champion features that will make your customers realize why Champion is the world's largest selling spark plug.

Sincerely yours,

Jim L

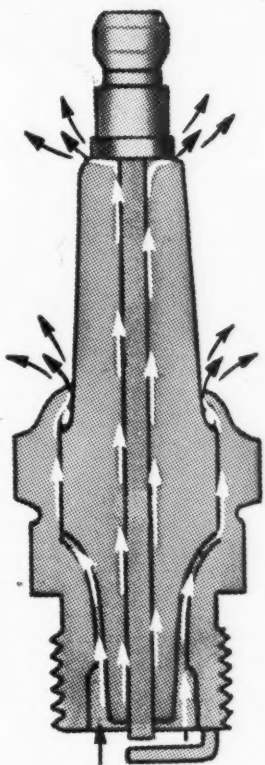
P.S. Just received another batch of newspaper surveys of motorists' spark plug preferences. In seven major cities 53.3 percent said they prefer Champions; Plug X averaged 17.1 percent and Plug Y, 16.7 percent. "Don't Knows" in the seven surveys were 8.3 percent - let's straighten them out!



DEALERS *IN THE NATION*

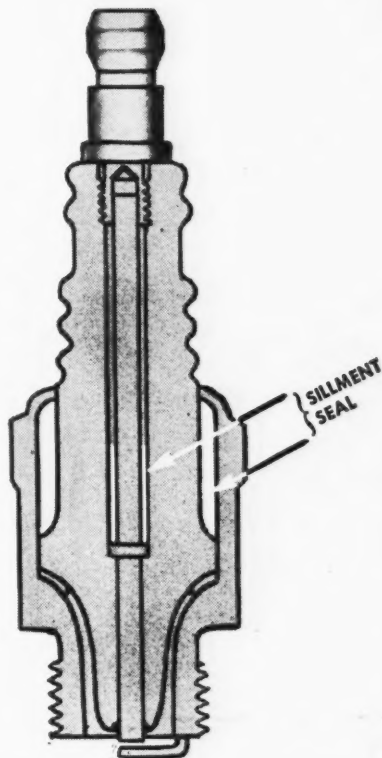
Exclusive!

ONLY CHAMPION PROTECTS AGAINST
POWER LEAKAGE WITH SILLMENT SEAL



PRESSURE LEAKAGE IN AN ORDINARY PLUG
CAUSES OVERHEATING AND POWER LOSS
RESULT:

A DISSATISFIED CUSTOMER —SOLUTION—
TELL HIM ABOUT CHAMPIONS



CHAMPION SILLMENT SEAL
POSITIVELY STOPS GAS AND COMPRESSION
LOSS. HELPS YOUR CUSTOMER GET ALL THE
POWER AND PERFORMANCE
HE PAYS FOR!

**There is no substitute for the
right combination of linings**

***Raybestos* PG Sets offer you**

Raybestos PG Brake Lining Sets are factory packaged in the right combinations for your use and are backed by exhaustive Proving Ground tests. Seven different processes are used to give every make and model of car safer, surer stops and longer lining life. Hard-hitting ads in leading consumer publications have been preselling car owners on Raybestos quality for 38 years. Use the Raybestos Brake Certificate to bring in the business.



LINED BRAKE SHOES or BOXED SETS
in the correct brake lining combinations for every make and model of car. Bonded or riveted. Every piece branded for your protection.

**CONSISTENTLY ADVERTISED IN THE
POST AND Farm Journal**

DON'T BUY INFERIOR BRAKE LINING. IT'S DANGEROUS!

Reline with
***Raybestos*®** **PG SETS**
AMERICA'S BIGGEST SELLING BRAKE LINING



RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., Bridgeport, Conn.
RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Hose • Industrial Rubber Products
Rubber Covered Equipment • Asbestos Textiles • Teflon Products • Packings • Sintered Metal Products • Abrasive and Diamond Wheels • Bowling Balls

Replace—



WORN CARBURETORS

with a NEW STROMBERG

The Quality Carburetor

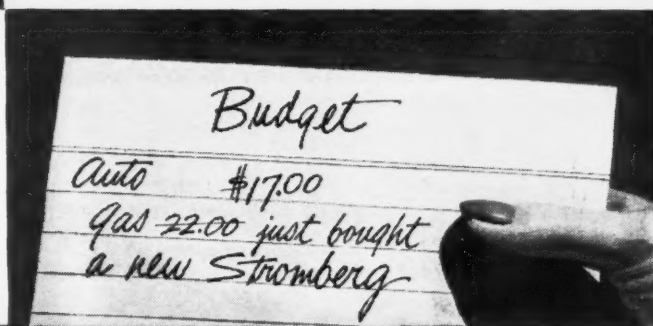
You get longer profits

There's no reason for making a short profit when you can make a long one! And here's how you can do it—start selling new Stromberg* replacement carburetors to your customers instead of time-consuming, short-profit repair jobs. You can install a Stromberg in much less time—and for about the same cost—than it takes to repair an old, worn-out carburetor. But here's the difference—you make a longer, neater profit on Stromberg! No trade-in troubles or exchange parts problems to worry about. Only the Stromberg program gives you the short but complete line, the installation ease, the completely reliable quality and the sales helps that make it easy to build up a big business in carburetor replacement with the smallest investment in time and money.

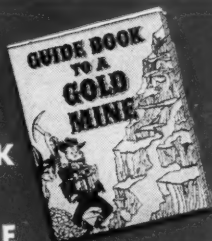
*REG. U. S. PAT. OFF.

Your customer gets longer mileage

Stromberg carburetors are built to deliver more miles per gasoline dollar! A saving of only 20% on the average yearly gas bill—easily possible with a new Stromberg—amounts in a single year to more than twice the price of a Stromberg replacement carburetor. Here's savings that mean sales for you!



Send
for the
GUIDE BOOK
to a
GOLD MINE



Write for your copy to-day! It tells how every garage and service shop can open up a new vein of profits selling Stromberg replacement carburetors.



Replacement
Carburetors—
Repair Kits



Hydrovac* Power
Brake—Trailer Power
Braking Systems



Original
Equipment
on most cars



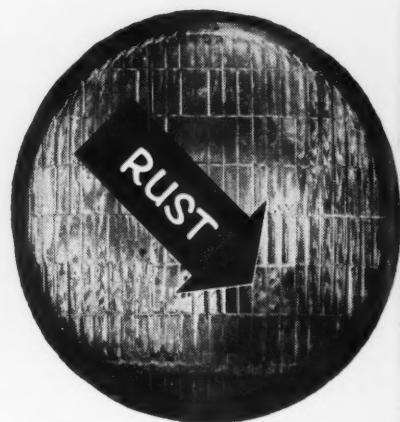
Cold Immersion
Parts Cleaner saves
time and money

Bendix SOUTH BEND
PRODUCTS DIVISION INDIANA



Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.
Canadian Sales: Bendix-Eclipse of Canada, Ltd., Windsor, Ontario, Canada

When you see headlamps like these—



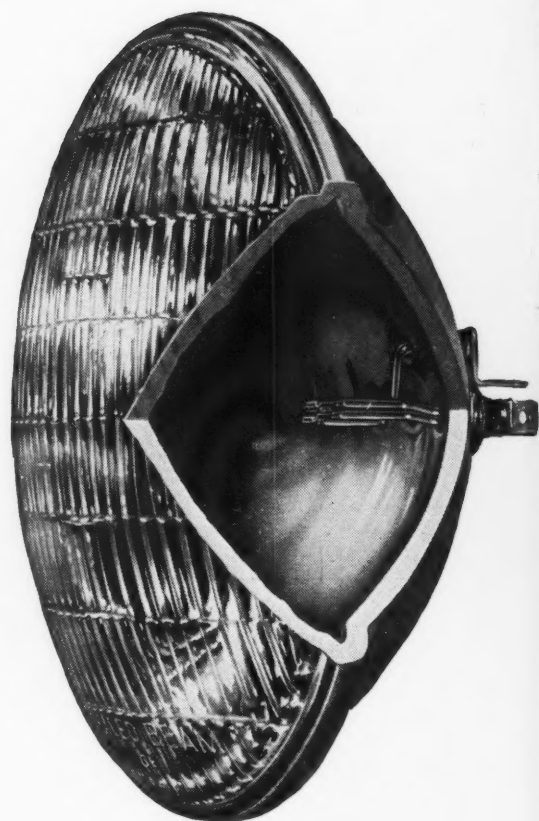
**it's a sure sign
you can sell
one of these →**

YOU'VE SEEN PLENTY of headlamps like the ones above—water or drops of moisture inside the lens, blackening on the inner bulb, rust and tarnish on the inside reflector, cracks in the glass. Watch for them. They rob light vital to safe night-time driving.

MAKE A HABIT of checking headlamps when cars pull in for service. You can do it easily, quickly. And when you spot troubles like those above, let the customer know he may be "*headed for headlamp trouble*". This phrase gives you a perfect lead-in to sell a G-E "All-Glass" Headlamp. (Chances are most customers will want to buy two new lamps.)

TELL YOUR CUSTOMER HOW G-E Headlamps' one-piece construction keeps out dirt and moisture, eliminates tarnish, rust. (See cutaway, right.) Show him that the General Electric Headlamp has no inner bulb to blacken. The headlamp is *one big bulb*. Tests show they average 99% as much light after years of service as when new.

BE SURE you have plenty of General Electric Headlamps on hand. Order some today!



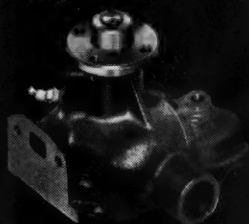
G-E All-Glass headlamps DO NOT GROW DIM

You can put your confidence in—

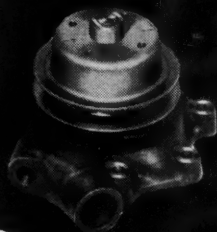
GENERAL  **ELECTRIC**

Anti-freeze time is—

Water



Pump



Time!



Repair-Replace-with Allied... the most complete line of water pumps and repair kits

Every time a car comes in for anti-freeze or winter servicing, *check the water pump*. Weed out those faulty pumps that cause so much winter trouble and let costly anti-freeze leak away. If new parts are needed to repair the pump, remember that Allied's line of repair kits is the broadest in the industry. Each kit is packaged for the make and model you're working on. And to replace pumps beyond repair, there are *vacuum-tested* Allied Grapho water pumps for practically all cars and trucks. For complete repair kit service . . . and new Allied Grapho water pumps . . . call your Allied Jobber first!

ALLIED MOTOR PARTS COMPANY • DETROIT 1, MICH.

Allied
MOTOR PARTS

Pistons • Piston Pins • Piston Pin Bushings • Piston Pin Set Screws • Piston Pin Lock Rings • Valves • Valve Guides • Valve Keys • Valve Springs • Expansion Plugs • Cylinder Sleeves • Cylinder Sleeve Assemblies • Water Pumps • Water Pump Parts and Packing

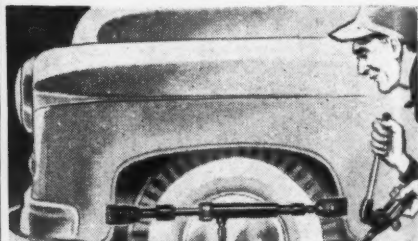


Does more! Costs less! Get the NEW PUSH-OR-PULL KIT



You get this biggest value
in body jack history by
asking for KIT No. AZ-11,
only **\$127.50**

IMAGINE DOING ALL THIS!

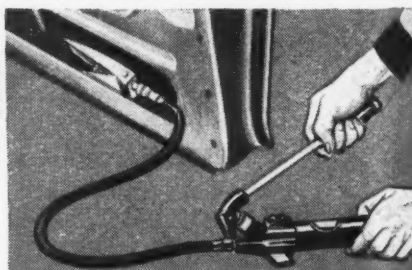


PULL MORE WAYS! New "Pull Clamp" attachments have more gripping action and eliminate chains. For aligning fenders and trunk openings. Quickly assembled. Used with fast-acting Blackhawk Bantam "Pull" Ram.

Tested and proved in Detroit!



ANOTHER WAY TO PULL! Harnesses the Bantam general-purpose ram so that a push becomes a pull or clamp action. For work on hoods, top section of center pillar, alignment of sections, bumper, and other body sections.



SPREAD with the famous "Wedgie." It has a built-in hydraulic ram, and slips in where other tools can't go. Powered by the dependable Bantam pump. Connects quickly to Speed-Coupler hose. A real time saver!



GO FROM PULL TO PUSH FASTER! By the stop watch, it takes less than 5 seconds to change from one Bantam ram to another — thanks to Speed-Coupler. And, there's no time-consuming pumping back the plunger.

Thousands of mechanics and shops are buying this WORLD'S FASTEST BODY JACK EQUIPMENT

Here's why this is the most *popular* body jack kit ever designed! It's bought *in bunches* — not just one or two per shop. Individual mechanics are getting equipped because it can *pull* more ways, *push* more ways and do more of everything . . . yet it sells for less than *anything* offered by *anybody* in this work range.

This 28-piece Bantam "Porto-Power" Push-or-Pull Kit is the mark of a pro. It assures a greater gross labor turn-out for each man because he works faster and he doesn't lose time waiting for others or looking for equipment. So order your kit today from the Blackhawk Jobber and make more *Dollars-from-Damage!*

Price subject to change without notice

A Product of Blackhawk Mfg. Company, Dept. P-693 Milwaukee 1, Wis.

Only **BLACKHAWK** makes *Porto-Power*

Grey-Rock balances two big advantages—

Extra SAFETY for your customers

Extra SALES for you

SAFE, SMOOTH STOPS



Even in the same brake, different shoes do different work. It takes a balanced combination of different brake linings to equalize wear and to provide sure, safe stops for many thousands of miles. Balance is not just a matter of high and low friction linings; it is the result of using many different linings in combinations properly engineered for each make and model. This balance principle, pioneered by Grey-Rock more than 20 years ago, reduces adjustments and come-backs . . . assures a better profit on each job.

A PROGRAM THAT GETS ACTION



To keep more and more customers coming to your shop for brake service, Grey-Rock gives you a complete program of merchandising aids and sales helps—from post cards and newspaper mats to shop posters and mechanics' caps. This entire program, too, ties in with Grey-Rock's consistent, colorful national advertising.

THIS TAG WILL BUILD BUSINESS



Packed in every Grey-Rock Balanced Brakset, this tag is ready for you to snap on a dash button of your customer's car. It tells how your workmanship joins with Grey-Rock balance to deliver a better, safer brake job!

See your Grey-Rock jobber for
**FACTORY-BONDED
SHOE EXCHANGE**



DISTINCTIVE WOVEN-MOLDED COMBINATIONS

Balanced Braksets for passenger cars

Balanced Trucksets for light trucks

Grey-Rock combines special woven linings with molded linings to meet the particularly severe brake requirements of certain makes and models. These woven-molded combinations provide brake action far better than can be achieved with molded linings alone. This is a distinctive Grey-Rock feature!

*For riveting or
bonding—every
piece factory-
branded for
your protection.*



Consistently advertised in

POST and Country Gentleman

Only **Grey-Rock** *makes*
BALANCED BRAKSET LININGS

BALANCED BRAKSETS • TRUCKSETS • BRAKE BLOCKS • VEE-LOK® CLUTCH FACINGS

GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.
RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings • Brake Blocks • Clutch Facings
Fan Belts • Radiator Hose • Industrial Rubber Products • Rubber Covered Equipment • Asbestos
Textiles • Teflon Products • Packings • Sintered Metal Products • Abrasive and Diamond Wheels
Bowling Balls

AGAIN IT'S

DU PONT

ANTI-FREEZE

DEALERS SAY, "IT'S THE BIGGEST MERCHANDISING IDEA THAT EVER HIT THE ANTI-FREEZE BUSINESS." READ HOW IT HELPED THEM INCREASE PROFITS ON ANTI-FREEZE, PARTS, CHEMICALS, AND WINTERIZING SERVICE.



"IT HELPED ME improve my service and dumped more money in my till . . . probably put around \$1,000 more in the cash register than the previous year!"

Joe Davis
Sweeney Super Service
Peoria, Illinois



"BY PROMOTING 'Anti-Freeze Week,' servicing of radiators was made at leisure . . . and sales of parts increased 130% . . . it's a good idea!"

Dick Gietzen
Gietzen Sinclair Service
Grand Rapids, Mich.



"MY ANTI-FREEZE sales doubled the amount I'd sold before. What's more, I sold \$175 worth of parts, chemicals, and service."

Ross Collier
Inwood Super Service
Station
Dallas, Texas

"WE SOLD \$250 more anti-freeze than last year . . . and had a \$125 increase in the sales of cooling system parts and services."

Edwin Goldich
Edward Goldich Service
Station
Northampton, Mass.



"DU PONT'S 'Anti-Freeze Week' increased my sales of anti-freeze 35% over any previous year. Sales of hose, clamps, thermostats and other cooling system services increased 50%!"

Jack H. Williams
Jax Service, Inc.
Toledo, Ohio



"IT GAVE US plenty of time to handle the flood of emergency calls from folks who weren't our regular customers. This way we picked up about 30 new regulars."

Garry J. White
Schenectady, New York



"IT GAVE ME an early start in selling anti-freeze and boosted my sales up more than 30% over last year's. Sales of hoses and clamps were up too!"

Craven Turner
Tire Sales and Service
Raleigh, N. C.



"I THINK Du Pont's 'Anti-Freeze Week' is a darned good idea. We sold 100 more gallons of anti-freeze this year . . . and cooling system parts amounted to about \$200 more than last year's."

William H. South
Pittsburgh 21, Pa.



"IT'S THE BEST set-up for bringing in winterizing business we've ever had. We sold about 25% more 'Zerone' and 'Zerex' than we did the year before."

John Patton
Smith Oil Service Station
Rockford, Illinois



Du Pont "Zerone" . . . America's economy anti-freeze buy

Again this year Du Pont's "Anti-Freeze Week" will help you beat that last-minute anti-freeze rush. No more frozen fingers . . . no more sore customers . . . no lost business. And by tying in with "Anti-Freeze Week"—by pushing this sales-boosting Du Pont idea in your own locality—by putting up point-of-sale material—you can raise your winter sales to the highest point ever.



Du Pont "Zerex" . . . the outstanding premium anti-freeze

WEEK

AT "ZERONE" AND

REG. U.S. PAT. OFF.

"ZEREX" DEALERS

REG. U.S. PAT. OFF.

OCTOBER 12 TO 17

AGAIN...

**YOUR CUSTOMERS
WILL BE TOLD WHY (IN
WORDS AND PICTURES)
IT'S BEST TO COME IN
FOR EARLY SERVICING**

AGAIN...

**"ACROSS-THE-BOARD"
ADVERTISING—ACROSS
THE LAND—WILL SELL
"ZERONE" AND "ZEREX"**

NATIONAL MAGAZINES

Your customers can't miss these exciting color ads in The Saturday Evening Post—ads that will bring them your way with early winterizing—and Du Pont anti-freezes—in mind!

TELEVISION AND RADIO

TV audiences in every major market will have Du Pont's "Anti-Freeze Week" promotion hammered home to them—in the popular evening hours and on Dave Garroway's morning TV show. Radio also will be used in selected markets.

NEWSPAPERS

America's most popular reading—the Sunday comics—will carry the Du Pont anti-freeze story. The benefits of early winterizing will be told in color in major newspapers throughout the country. Also in scores of daily papers.

BILLBOARDS

On highways and streets—where "Zerone" and "Zerex" pay off—Du Pont will direct a terrific campaign at motorists. Colorful billboards will shout the value of "Zerone" and "Zerex," bring extra profits your way.

FARM PUBLICATIONS

We're not overlooking the important farm market, either. There'll be powerful ads in Country Gentleman, a leader in its field, carrying our message deep into the rural farm market.

PUBLICITY

Here's a plus! Publicity releases on Du Pont's "Anti-Freeze Week" will go out to newspapers, magazines, and to radio and TV stations (timely items like these are snapped up by editors and news broadcasters). What's more—special tie-in promotions and displays are planned by department stores and related-product manufacturers.

IT'S ANTI-FREEZE WEEK

at Du Pont "ZERONE"
and "ZEREX" dealers

HERE'S WHY IT'S SMART TO USE YOUR DEALER THIS WEEK



DU PONT ZERONE America's economy anti-freeze

YOU CAN DEPEND ON A DU PONT ANTI-FREEZE... Most motorists do. You get complete anti-freeze and anti-rust protection all winter long.



DU PONT ZEREX the one that winterizes your car

Here's the ad that will hit your customers right between the eyes at the beginning of Du Pont's "Anti-Freeze Week." From then on, brother, watch your business grow!



BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY



plus— **MONEY-MAKING
POINT-OF-SALE MATERIAL**

Colorful displays that won't let winterizing customers forget what they came for... banners and streamers no motorist will miss...

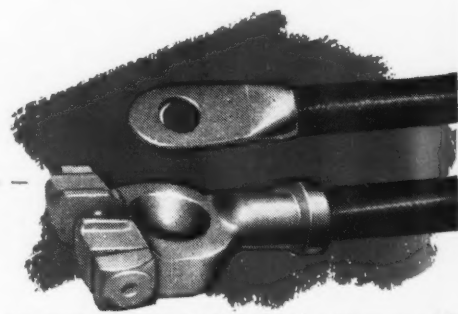
window displays that will attract a lot of attention (and a lot of sales). Simple to use... and mighty profitable!



"You sure were right
about Packard cable
being easy to sell!"



Build up your business
with the "BIG 3"
in the cable field!

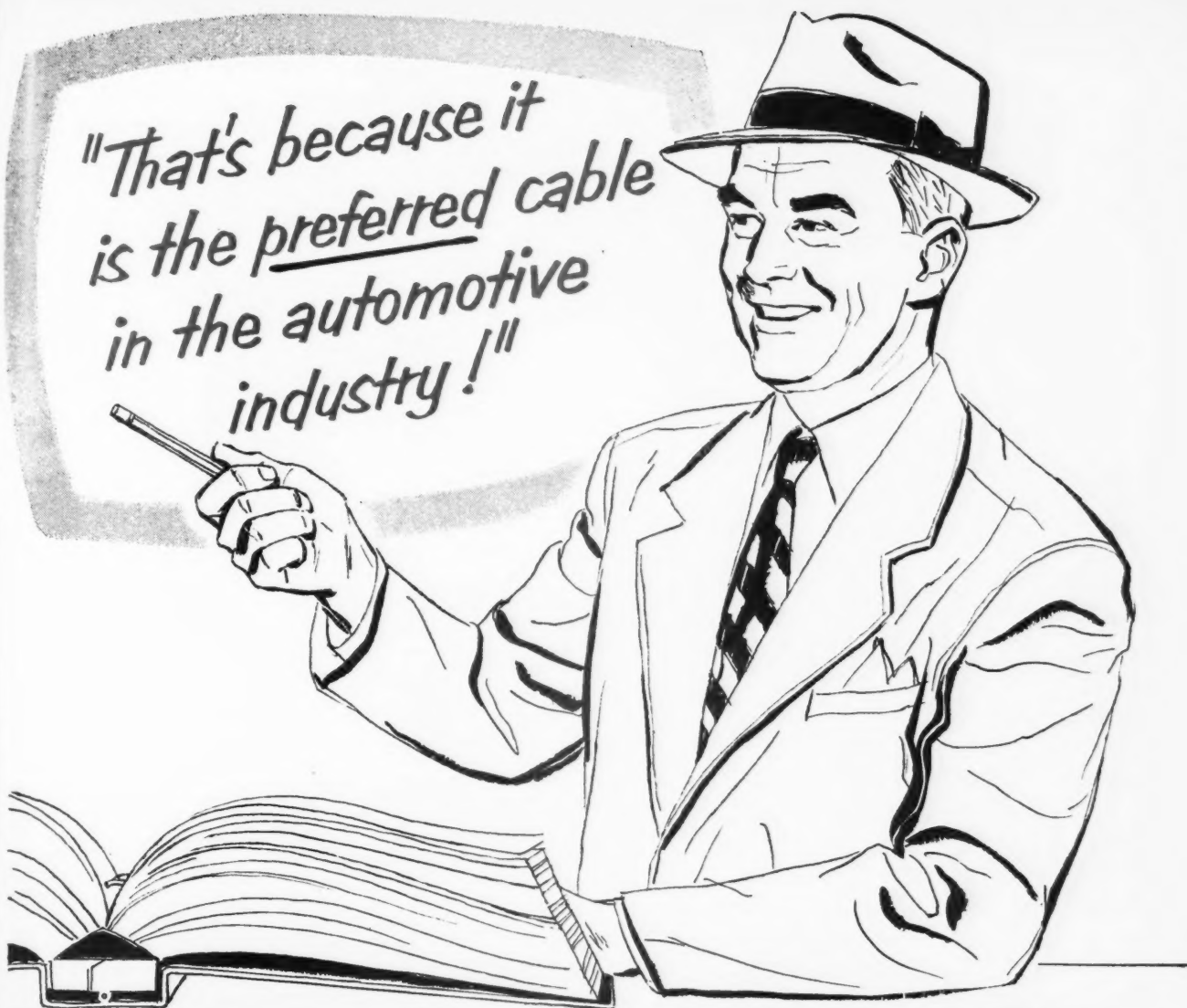


It's true—automotive engineers prefer Packard cable for original equipment on cars, trucks, buses and tractors—vehicle owners and repair shops prefer it for replacement service—jobbers and dealers prefer it for its wide *acceptance* and quick *turnover*.

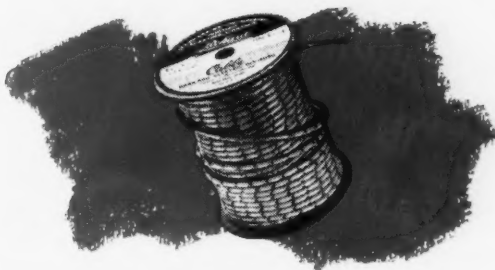
PACKARD BATTERY CABLE—Packard battery cables are used as original equipment on more cars, trucks, buses and tractors than cables of any other make. Packard battery cables are full size, full weight . . . are available with **LEADALLOY** terminals or leaded brass terminals. Both types are packaged in individual cartons—both deliver top performance—both have acceptance everywhere.

FOREMOST BUILDER OF AUTOMOTIVE WIRING

"That's because it
is the preferred cable
in the automotive
industry!"



PACKARD IGNITION CABLE—Long considered the standard of the automotive industry, Packard high-tension cable is original equipment on more cars, trucks, buses and tractors than any other cable. Packard **FOUR-FORTY** and Packard **LAC-KARD** ignition cables are designed to deliver balanced performance in every application. For dependability on the job, choose Packard!



PACKARD LOW-TENSION CABLE—As with Packard's two other products, Packard low-tension cable is used as original equipment on more cars, trucks, buses and tractors than cable of any other make. Packard's **249 COMPOUND** insulation, by every laboratory test and by the test of long, hard usage in the field, has exceptional resistance to heat, oil, chemicals and abrasion.

Packard
REG. U.S. PAT. OFF.
TRADE MARK

Packard Electric Division, General Motors Corporation, Warren, Ohio

A GENERAL MOTORS PRODUCT   A UNITED MOTORS LINE

AVAILABLE THROUGH DISTRIBUTORS EVERYWHERE

THEY
FIT RIGHT
PERFORM
RIGHT

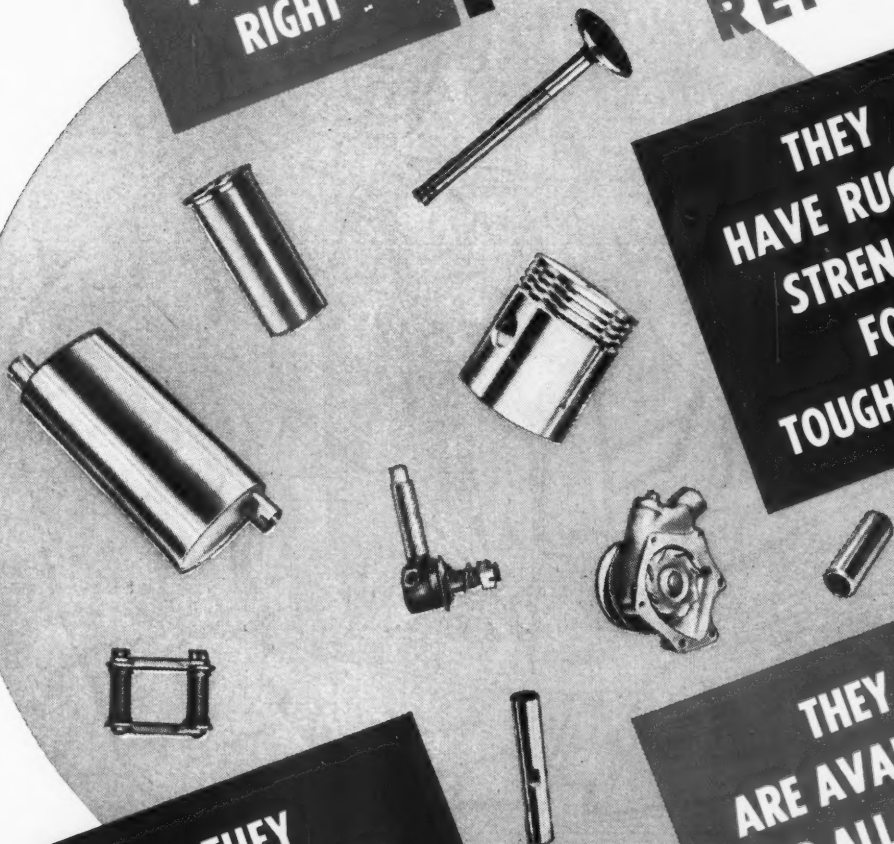
PERMITE

REPLACEMENT PARTS

THEY
HAVE RUGGED
STRENGTH
FOR
TOUGH SERVICE

THEY
ARE AVAILABLE
FOR ALL MAKES
AND MODELS
OF CARS,
TRUCKS, BUSES

THEY
ARE ORIGINAL
EQUIPMENT
IN MANY
LEADING MAKES



For better engine and chassis overhaul jobs, use durable, dependable Permite Replacement Parts. They help you restore new car performance. See your Permite Jobber for the parts you need on your next repair job.



ALUMINUM INDUSTRIES, INC. CINCINNATI 25, OHIO

PERMITE Replacement Parts

PISTONS • PISTON PINS • VALVES • VALVE GUIDES • VALVE STEM KEYS • VALVE SPRINGS
WATER PUMPS • WATER PUMP PARTS • CYLINDER SLEEVES AND ASSEMBLIES • TIE ROD ENDS
SPRING SHACKLES • KING BOLT SETS • BUSHINGS • MUFFLERS AND CLAMPS • TAIL PIPES

These Fast-Moving
Original Equipment
Parts Will be **80%**
of Your Holley Volume

MINIMUM STOCK GIVES FUEL AND IGNITION COVERAGE

As few as eight basic parts will be 80% of your Holley volume. All are fast moving, high turnover items.

Also available is the newly-engineered R-713 carburetor, that gives you 20 years of original equipment coverage in one model.

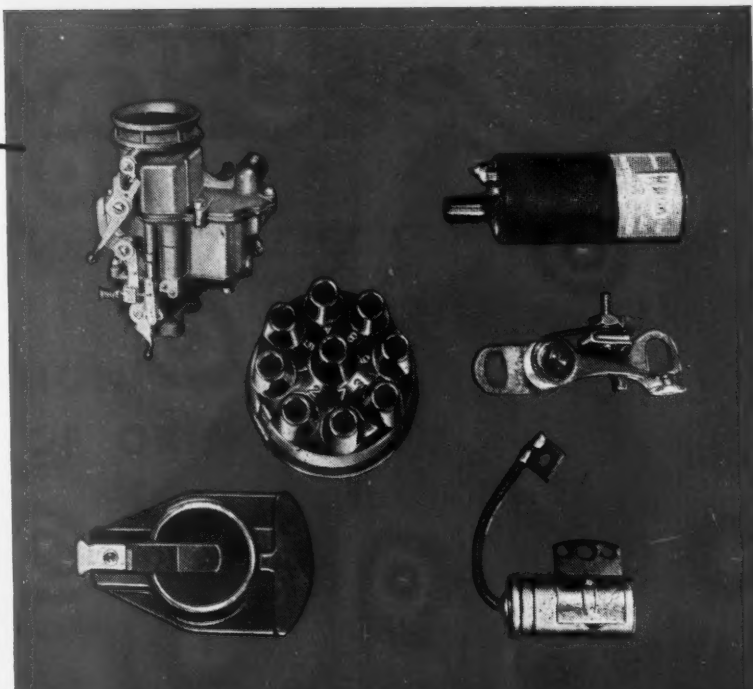
All of these original equipment parts are available in an initial stock designed to fit your requirements. Contact your nearest Holley distributor today.



5930 VANCOUVER AVE.
DETROIT 4, MICH., U.S.A.

FOR MORE THAN HALF A CENTURY ORIGINAL
EQUIPMENT MANUFACTURERS FOR THE AUTO-
MOTIVE INDUSTRY.

RT-18

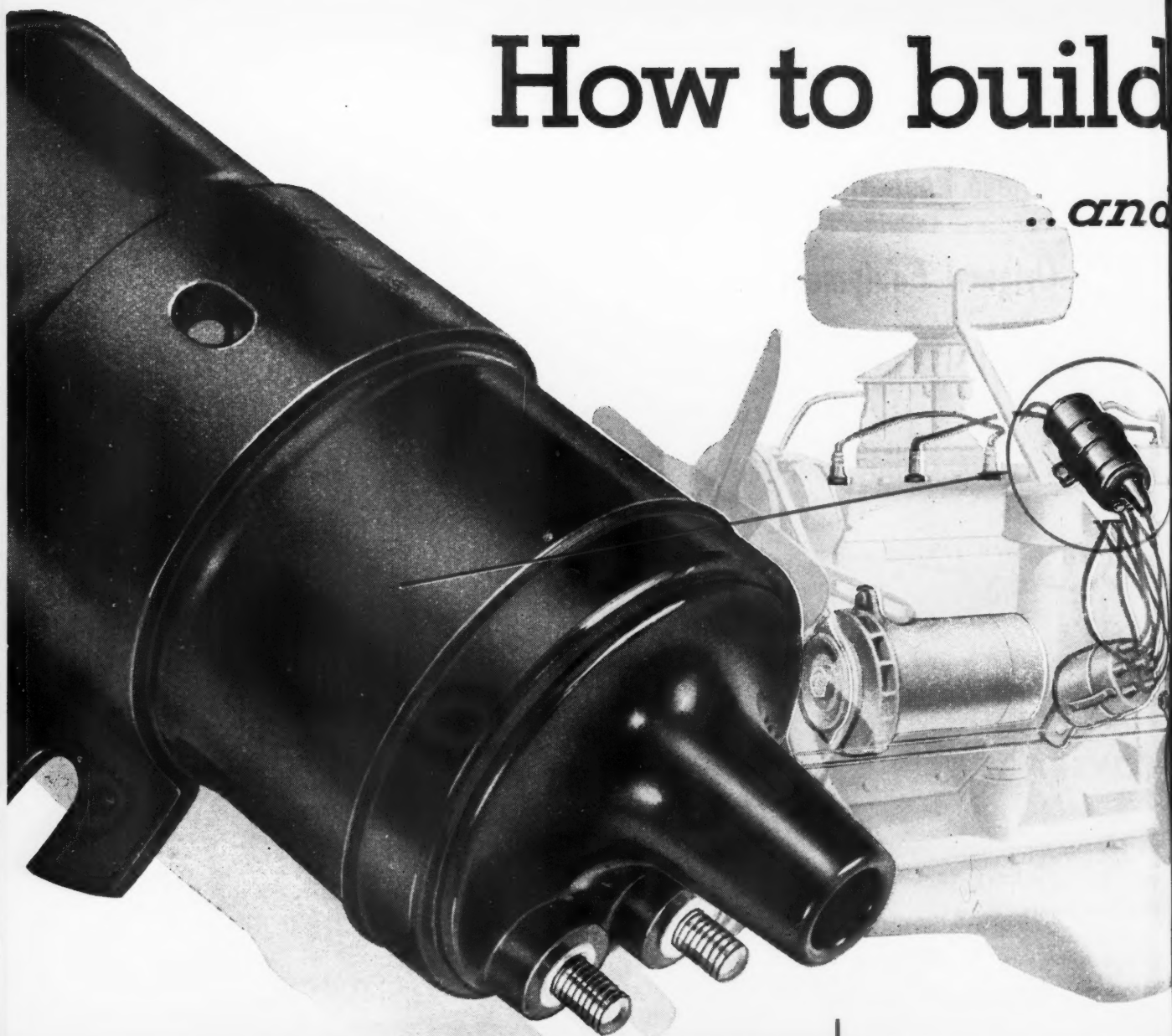


PART NO. HOLLEY	DESCRIPTION	APPLICATION
R-713-AAS	CARBURETOR	1934-53 FORD V-8 PASSENGER, 1939-48 MERCURY
34D-37970	DIST. CAP	1949-52 FORD & MERCURY 8 CYL. 1950-52 LINCOLN
34D-37890	DIST. CAP	1947-52 FORD 6 CYL. PASS. & TRUCK
35R-99A	DIAPHRAGM	1949-53 FORD 6 AND 8 CYL. PASS. & TRUCK
76D-37910	ROTOR	1949-52 FORD 6 & 8 CYL. PASS. & TRUCK 1949-52 MERCURY 8 CYL. 1950-52 LINCOLN 8 CYL.
76D-38073S	CONTACT SET	1947-52 FORD 6 CYL. PASS. & TRUCK 1949-52 FORD & MERCURY 8 CYL. PASS. & TRUCK 1950-51 LINCOLN 8 CYL.
76D-38663	HEAVY DUTY POINT	1949-53 FORD 6 & 8 CYL. PASS. & TRUCK 1949-52 MERCURY 1950-51 LINCOLN
86D-35540S	CONDENSER	1941-48 FORD 6 CYL. PASS. & TRUCK
86D-38817S	CONDENSER	1949-53 FORD V-8 & MERCURY 1947-53 FORD 6 1950-51 LINCOLN
86D-38741	COIL	1942-48 MERCURY & FORD 6 & 8 CYL.
86D-38750	COIL	1949-52 FORD 6 & 8 CYL. PASS. & TRUCK 1949-52 MERCURY 8 CYL.
85R-313	*CARBURETOR CONVERSION KIT	34-48 FORD 8 CYL. PASS. 32-47 8 CYL. COMM. & TRUCK MERCURY 39-48
85R-314	*CARBURETOR CONVERSION KIT	1949-53 FORD 8 CYL. PASS. STD. TRANS.
85R-315	*CARBURETOR CONVERSION KIT	1951-53 FORD 8 CYL. PASS. AUTO. TRANS.

*Conversion kits not required if levers and brackets from old carburetors are used.
**This part not to be used on 1953 Mercury.

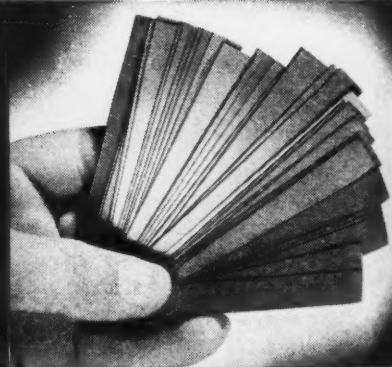
How to build

...and



AUTO-LITE COILS . . . like all Auto-Lite service parts, are related to the complete electrical system by Auto-Lite engineering, design and manufacturing skill to give your customers the best performance money can buy. Auto-Lite Coils are always sold as complete units.

AUTO-LITE BACKS DEALERS with "Suspense!" on coast-to-coast TV and Radio networks . . . national ads in leading publications . . . a huge ready-made market of many million Auto-Lite equipped vehicles . . . plus field help, world-famous training schools, informative catalogs and specifications, mat service and promotional material.




AUTO-LITE LAMINATED CORE is made of 0.014 inch silicon steel to keep losses at minimum. Contains a greater area of iron than is used by some manufacturers. A heavier—and cheaper—steel could be used to cut costs, but this would require increased current to compensate for added losses which, in turn, contributes to distributor contact failures.

Repeat business

boost sales on everything you handle!

MATCH YOUR HONEST WORKMANSHIP WITH THE QUALITY OF ORIGINAL SERVICE PARTS



THROUGH constant improvement and development . . . through use of the best, and often more costly, design, manufacture and materials . . . Auto-Lite automotive electrical systems, and the parts in the system, maintain the highest standards of quality.

This quality may cost slightly more but it's worth more! It protects your honest workmanship . . . assures you greater customer satisfaction . . . builds repeat business . . . boosts sales on everything you handle. Whether it's ignition coils, condensers, voltage regulators, generator brushes . . . or complete electrical systems . . . when you check detail by detail, you know Auto-Lite quality cannot be beat!

More than half of America's car makers specify Auto-Lite. When servicing Auto-Lite equipped cars, be sure to recommend and install Auto-Lite Original Service

Parts* to protect yourself and your customer. And display the Auto-Lite Original Service Parts sign.

THE ELECTRIC AUTO-LITE COMPANY

Parts & Service Division

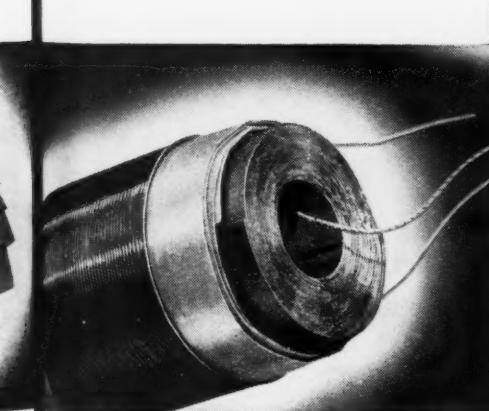
Toledo 1

Ohio

This sign identifies you as a source of Auto-Lite Original Service Parts*




*Original Service Parts are those specified by the car manufacturer.



AUTO-LITE WIRE WINDING within the coil is carefully controlled and tested to assure best performance and quality. Twenty-one thousand turns of wire specially drawn and enameled by Auto-Lite are used in the secondary windings. This amount of wire is important, because any decrease which would save money would, in turn, require an increase in current in the primary. By so doing, distributor contact failures would also increase.

AUTO-LITE TOWERS are designed to a scientifically proved height which best prevents current leakage. Made of a special phenolic material, the tower and its base can withstand maximum expansion and contraction during extreme temperature changes. These phenolic caps are built entirely by Auto-Lite, assuring accuracy and positive control to obtain greater dependability and performance.

AUTO-LITE TESTING is provided throughout every step in production of all Auto-Lite coils. Checks are made for polarity and for proper output, for presence of ground and for continuity of the circuit. Additional endurance tests equal to more than 50,000 miles of service are conducted in Auto-Lite laboratories to assure your customer long life, best service, and a part that harmonizes with his entire electrical system.




WALKER "PRECISION

THE

*LOW SPEED FLEXIBILITY

*ACCELERATION FROM 0 TO 60 MPH

*POWER RESERVES FOR GREATER SPEED



Walker "Precision Tuned" Silencers are a Basic Part of the Modern Engine's "Breathing System" a Vital Influence in the Improved "GO-FACTOR"

In this new generation of engines, the most direct and practical route to the improved GO-FACTOR lies through *increased volumetric efficiency* . . . or the improved ability of the engine to breathe . . . to effectively utilize a greater charge or volume of air-fuel mixture and transform it into increased horsepower.

As a basic part of the engine's breathing system, proper exhaust system design exerts a vital influence on car performance . . . on its final horsepower rating . . . on its GO-FACTOR. No longer can yesterday's mufflers meet even the minimum requirements of these new standards.

And once again Walker sets the pace with

"Precision Tuning" . . . a new generation of Walker Silencers to meet the new, complex problems of a new generation of engines.

Walker "Precision Tuned" Silencers are designed as an integral part of engine design . . . to quiet the heavier power notes of these new, more powerful engines without power loss . . . to specifically solve the new and difficult problems of shell noise . . . "transmission boom" . . . "tail pipe bark" . . . and still preserve the full measure of "traffic flash" and reserve power designed into every modern automobile.

Yes—Walker "Precision Tuned" Silencers bring 'out the "GO-FACTOR"!

WALKER MANUFACTURING COMPANY OF WIS. • RACINE, WISCONSIN
Exhaust Silencers . . . Oil Filters . . . Jacks

"PRECISION TUNING"

for the new generation of engines and automobiles—now and to come

"INDIVIDUAL TUNING"

for the millions of fine cars, trucks and buses still in active service.

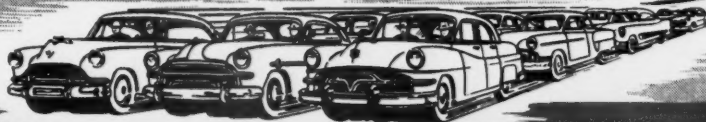
NOW MORE THAN EVER

WALKER

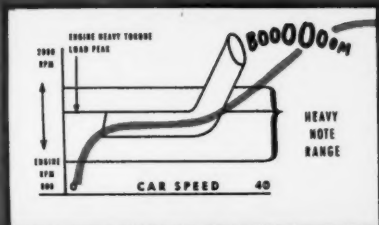
TUNING" BRINGS OUT

GO FACTOR*

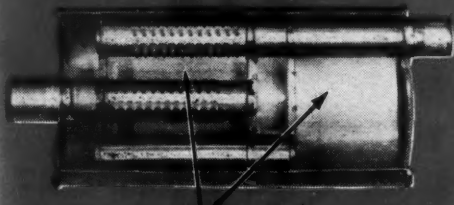
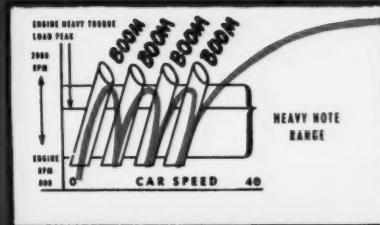
* GO FACTOR means the ability of the car to get into quick motion



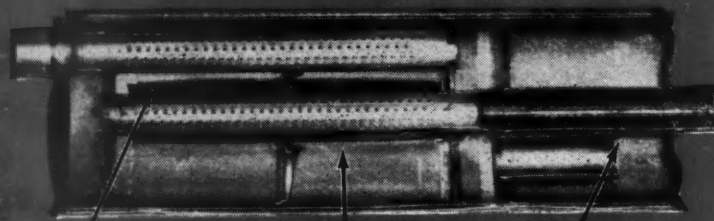
HERE'S HOW WALKER "PRECISION TUNING" SOLVES THE AUTOMATIC TRANSMISSION PROBLEM



Automatic transmissions not only play an important part in the "Go-Factor" of the modern automobile, but in doing so create new and different power note problems called "Transmission Boom."



Unique design of Tuning Chamber with Volume Passage greatly reduces "Torque Converter" BOOM.



Tri-Flow design, Volume Tuning Passage, Tuned Resonator are all used to control Hydramatic Type Transmission "BOOM — BOOM — BOOM."

Roughness Chamber

SILENCERS

MAKE THE DIFFERENCE



TAKE A FRESH LOOK AT

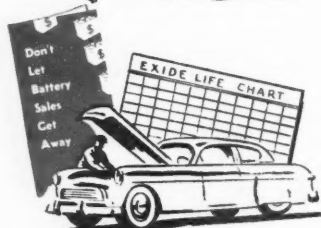
Switch to Exide

HERE'S WHY!



EASIER TO SELL

because Exide batteries have a reputation for extra high performance . . . extra long life . . . *complete dependability*. Selling the Exide line is good business, a repeat business . . . a real money-maker.



THEY STAY SOLD

because of the high quality raw materials that go into every Exide, with rigid inspection to assure top quality day in and day out.



PRICED RIGHT

Exide batteries give dollar-savers and quality-seekers *more for their money* . . . and provide good profits for the dealer.

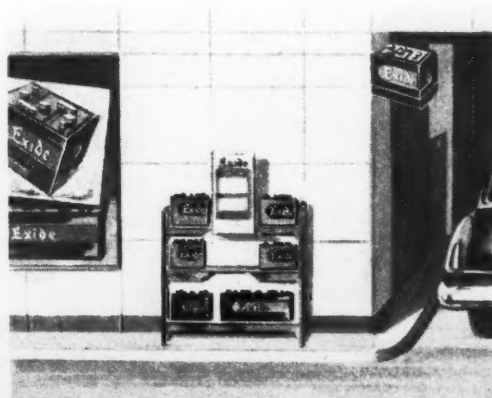
HERE'S HOW!

TIE IN WITH THE SATURDAY EVENING POST AD

TIE IN YOUR STATION! Put up reprints of the giant Post spread. Be sure your Exide signs are up.

DISPLAY BATTERIES! Put batteries out where customers can see them. Don't miss a single sale.

TEST BATTERIES! Use your Exide Check Charge Tester. Show motorists the condition of their batteries. Tell 'em—and you'll sell 'em.



FALL BATTERY SALES...

... Sell the Best!

This Giant 2 Page Color Spread will appear
in the October 3 Issue of The Saturday
Evening Post! Tie in! Cash in!

*When it's
an Exide
...you start!*

WINTER, SPRING,
SUMMER OR FALL
EXIDE BATTERIES
ARE BEST OF ALL!



IT'S GOOD TO BE AN EXIDE DEALER!

You sell the best, with the most powerful support in the battery industry. Your Exide wholesaler will describe other huge benefits for you in the Exide dealership. Call him today!

THE ELECTRIC STORAGE BATTERY COMPANY
Philadelphia 2

Exide Batteries of Canada, Limited, Toronto

"EXIDE" and "ULTRA START" Reg. T.M. U.S. Pat. Off.

WHEN IT'S AN

Exide

...YOU START!



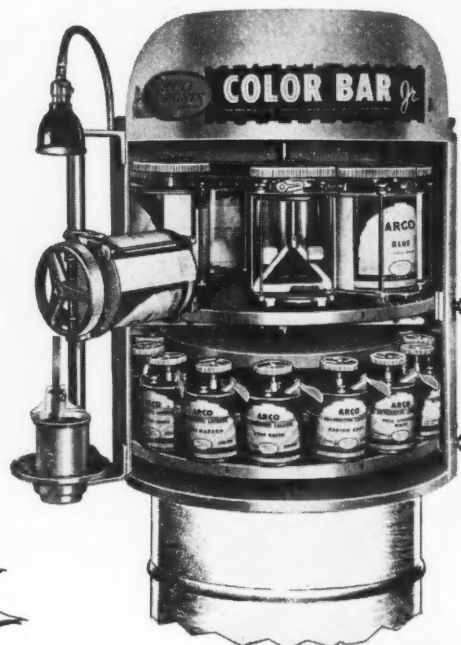
LITTLE GUY WITH AN EYE FOR

Big Profits

EARNS 49¢ TO 53¢ SAVINGS
PER PINT OF PAINT!

that's **COLOR BAR, JR.**

Perched on a bench or paint drum, "Junior" can handle your color matching with the speed and accuracy of the COLOR BAR®.



Amazing

... how much profit a little eager beaver can make for a small investment.

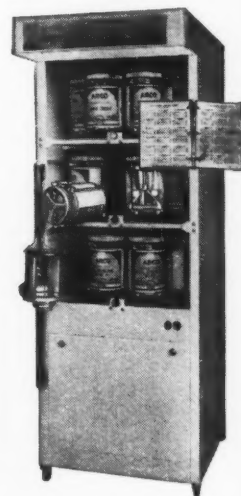
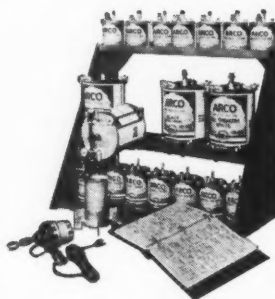
You buy a minimum inventory of base mixing colors at gallon and quart tinting color prices ... make over 3000 perfectly matched colors for all cars. Make only what you need ... half pints to gallons ... no wasted paint. That means **BIG PROFITS** when you use **COLOR BAR, JR.** ... or any Arco Champion Color Machine. Send today for folder on how to build your refinish business in less space than it takes for a lemonade stand.



Points, Lacquers,
Varnishes, Enamels,
Interior and Exterior
Protective Coatings

THE ARCO COMPANY • 7301 BESSEMER AVE. • CLEVELAND 27, OHIO
ARCO COMPANY OF CALIFORNIA, LTD. • 745 E. 59 ST. • LOS ANGELES 1, CAL.

COLOR CADDY
Ideal, low-cost
machine. Electric
agitation.



COLOR BAR®
All-time Champion. Last word
in fast, accurate all-electric
color matching.

It takes all kinds of customers...



...but they all want the best. And when it's bearings, just tell 'em it's *TIMKEN®*!

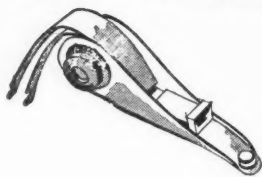
If you want to keep customers coming back, let them know you use the best replacement parts. So when you install a tapered roller bearing, be sure to point out the trade-mark "Timken". To car owners, it means top quality and dependability. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN *TAPERED ROLLER BEARINGS*
TRADE-MARK REG. U. S. PAT. OFF.



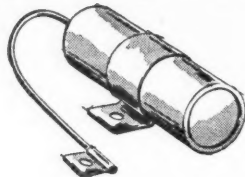
NOT JUST A BALL ○ NOT JUST A ROLLER □ THE TIMKEN TAPERED ROLLER □ BEARING TAKES RADIAL (⊙) AND THRUST →(→)← LOADS OR ANY COMBINATION (⊙)←

get more tune-ups



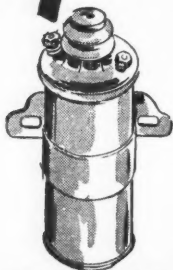
TUNE-UP PAKS bring in a raft of Tune-Up business. You get Tune-Up signs, streamers and pennants . . . plus ad mats for your local paper! TUNE-UP PAKS contain points, condensers, rotors, distributor heads and coils for Fords, Chevies, or Plymouths.

give better tune-ups



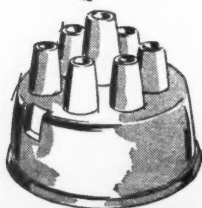
With TUNE-UP PAKS you get BLUE STREAK *Tune-Up Bulletin*. Gives you 18 important steps to do first-rate Tune-Up. And famous BLUE STREAK Heavy-duty parts make every Tune-Up a better Tune-Up.

use heavy duty parts



Famous BLUE STREAK WARRANTY is reputation insurance. Exclusive BLUE STREAK features—triple-protected coil top; hermetically sealed condenser—guarantee your customers peak ignition performance.

here's a special buy



TUNE-UP PAKS at a special price to help you get new Tune-Up work. You get BLUE STREAK parts for Fords, Chevies, or Plymouths (fit many other cars), display materials, ad mats — the "whole works" — for less than you would ordinarily pay for the parts alone!



Tune-Up
Better your Business!
 Buy Blue Streak Tune-Up Paks



FREE INFO, WRITE "TUNE-UP PAK" STANDARD MOTOR PRODUCTS, 37-18 NORTHERN BLVD., L. I. CITY 1, N. Y.

YOU AND A McCASKEY CASH REGISTER SYSTEM

Will Really Control Your Transactions In Cars, Parts and Repairs



Practical Registering Capacity

You can register car sales to within 1¢ of \$10,000 in one McCaskey register ring-up...

Certified Records

You can have certified sales slip, work order and paid-out records of daily transactions—identical with your register printed detail strip records and positive proof of correct amounts received, paid and recorded.

Item-Added for Accuracy

You can have an item-added breakdown of transactions including more than one item—listed and totalled individual amounts for parts, time and other items sold, from sales slips and work orders.

This certified work order protects you!

PTS A	2 25	—
PTS	1 27	50
ACS	7 95	—
OIL	2 40	—
	2 55	ST
TAX	46	—
LAB	1 37	50
	3 95	6T
M-C D	2 79	50
TAX	53	90
	2 85	09
		0T

TOTAL LABOR	13	75
TOTAL PARTS	15	00
ACCESSORIES	2	95
6 GAS, OIL, GREASE	2	40
MISC. MERCHANDISE		
SUBLET REPAIRS		
TAX		46
PAY THIS AMOUNT	39	56

3956T

Your typical McCaskey Detail Strip Control Record.

YOU OBTAIN IN THE McCASKEY CASH REGISTER SYSTEM A SIMPLIFIED METHOD THAT HAS ACTUALLY "GROWN UP" WITH GARAGE AND AUTOMOTIVE EXPERIENCE DURING THE LAST 50 YEARS!

McCaskey Cash Register Systems • Charge Account Control Systems • Sales Books and Continuous Forms • Fire Protection for Vital Records • ALL offer you the benefits of simplicity, completeness of usable records and protection against losses.

McCaskey Register Company, Alliance, Ohio

SEND INFORMATION ON THE PRODUCTS CHECKED:

- ☐ McCaskey Cash Register System
☐ McCaskey Charge Account Control System

- ☐ McCaskey Steel Safe
☐ McCaskey Sales Books and Forms

NAME..... ADDRESS.....
 CITY..... STATE.....

THE McCASKEY REGISTER COMPANY • ALLIANCE, OHIO

Boston • New York • Philadelphia • Washington, D. C. • Atlanta • Pittsburgh • Kansas City • Cleveland • Chicago
 Detroit • Minneapolis • Dallas • San Francisco • In Canada, Galt; In England, Watford

✓ Better than any ring set without

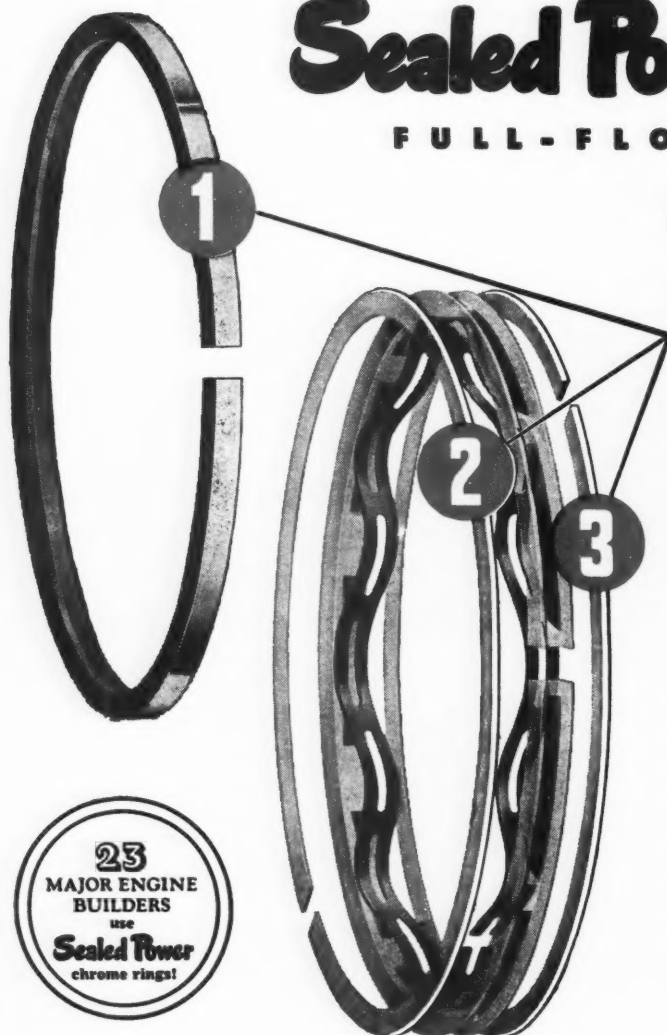
CHROME

✓ Better than any other

CHROME ring set

Sealed Power KromeX

FULL-FLOW RING SETS



3 vital surfaces are
CHROME
protected

Top Compression Ring of chrome-alloy cast iron has solid chrome face, factory-lapped to a light-tight finish, with sides Granosealed for greater flexibility.

MD-50 Steel Oil Ring with the Full-Flow Spring has chrome faced side rails for double mileage, with sides Granosealed for greater flexibility.

All rings in Sealed Power KromeX Ring Sets are beveled or tapered to thread-line contact for quicker seating and blow-by control.



Best for Fighting Heat, Friction, Corrosion, Abrasion

SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST IN NEW CARS BEST IN OLD CARS



Newscoop

"I Cover the Detroit Autofront" ..by Len Westrate

OFFICIALS OF THE AUTOMOTIVE PARTS industry are irritated at talk in the general press about a business recession and the danger of carrying high inventories. They fear it will cause wholesalers and retailers to buy on hand-to-mouth basis instead of carrying normal supplies. They believe that the caution psychology has had some effect already with the result that parts buying apparently more closely reflects the actual market than at any time in recent years.

WE HEAR THAT PONTIAC next year will again offer two major series, a practice which was abandoned with the 1949 model. This may be Pontiac's answer to the Buick special which is priced down practically in the Pontiac field at the moment. The added new series will be larger than the current Pontiac, with roomier body and presumably longer wheelbase.

FORD HAS ANNOUNCED it will carry on research in gas turbines for automobiles, but the development is not really new, since Ford announced some time ago at the opening of its research facilities that it was planning gas turbine studies. Also, GM, Packard and Chrysler have been working on turbines for several years now. In fact, GM plans to put one into an experimental automobile next year.

GENERAL MOTORS IS OPENING the first of its 35 service training schools this month at Detroit. GM is about half way through its job of acquiring sites and plans to have the entire 35 schools in operation within the next year. Ford also is planning to open its technical service laboratory at the Ford Division headquarters near Detroit this month.

CHRYSLER IS SETTING UP a permanent service training school at its McDougall plant in Detroit. Objective is to bring in key men from the field organization and from major dealers for instruction on service, particularly on new developments such as air conditioning. These men will carry the information back to the field to instruct service mechanics.

IT IS HIGHLY LIKELY that chrome plating on passenger cars will go back to pre-Korea standards before the end of this year. Nickel is expected to come off the restriction list by December, resulting in reinstatement of pre-Korean plating specifications. Industry opinion is that there is plenty of nickel around to meet the industry's needs and it will come out of hiding when restrictions are lifted.

WE KEEP HEARING REPORTS that Kaiser Motors is trying to line up an engine from outside suppliers for use in the Kaiser car. Most recent involve the Reo Gold Comet and perhaps a V-8 overhead valve truck engine being developed by an engine manufacturer. Neither of these reports can be confirmed, although it is known that the Reo engine has been put in a Kaiser car for observation.

AUTOMOBILE COLORS WILL TREND toward the "grayed" variety next year. Grayed colors differ from the high chroma type in that the sharp luster is reduced without affecting depth and quality. 1954 models also will feature even greater matching of trim and exterior, and possibly more limitations on the number of colors available, especially in certain deluxe models which may come in only one exterior color.

HUDSON HAS MADE ARRANGEMENTS for adoption of a different type of automatic transmission to take the place of Hydra-Matic drive, following the fire at GM's Livonia plant. The unit will be similar to one now used by another independent and which has been thoroughly tested on more than 100,000 units. The new transmission is not intended to be a temporary stop-gap, but will continue to be used even after Hydra-Matics again are available. Nash also is reported to be negotiating for the same drive to be used by Hudson.

CADILLAC HAS REVEALED further details of its plastic-bodied LeMans experimental car following a press showing at the GM proving ground. It is powered by a modified Cadillac V-8 engine which develops 250 hp with a 9 to 1 compression ratio. Included among the modifications are two 4-barrel carburetors, redesigned manifolds, high-lift valves, and two special air cleaners and mufflers. The Hydra-Matic transmission has been adopted.

THE AUTOMOTIVE INDUSTRY is more optimistic about the possibility of a reduction in federal excise taxes on automotive vehicles than it has been for several years. Although Congress this year did nothing about the industry's plea for a tax cut, automotive officials report that the reception given to the presentation by A. E. Barit, Hudson president, who represented the industry, is considered a favorable sign for possible relief next year.

A FORD EXECUTIVE has made an interesting proposal to the National Project Adequate Roads (PAR) committee. George J. Crimmens, director of dealer relations, suggests that the committee seek the cooperation of railroads for building expressways over existing railroad rights-of-way.

HE CONTENTS THAT fantastic costs of new highway construction might be greatly reduced by building elevated expressways over existing railway tracks or surface expressways on rights-of-way adjacent to existing tracks or in place of tracks moved underground. He pointed out that railroads already have excellent existing routes fanning out from metropolitan centers to residential sections and that use of such rights-of-way would eliminate costly condemnation and destruction of property.

Washington Wireby Ray M. Stroupe

MAIL SHIPMENT of the battery power AD-X2 is no longer contested by the government. The Post Office Dept. recently canceled its ban on mailing of the product, which, its inventor says, will make auto batteries last longer. The order barring AD-X2 from the mails was issued last February and suspended the following month. The National Academy of Sciences is studying tests made of AD-X2. The report may help settle disagreement on merits of the product.

REPORTS FROM THE STATES show bills affecting auto and truck equipment were considered by many legislatures this year. Twenty states discussed bills requiring mudguards on trucks and trailers, but only three--Connecticut, Idaho and Wisconsin--put through new laws. Florida, New Mexico, Oregon, and North and South Dakota enacted safety-glass laws. New Mexico and four other states amended their brake requirements.

BUSINESSMEN MAY FIND themselves paying an added \$55 million a year to cover the cost of express shipments. This higher amount will be needed because of a 15 per cent boost in Railway Express Agency rates, provided there is no drop in shipping. New rates, approved to cover the rise in operating costs, became effective August 20.

LOOK FOR CUTS in federal excise taxes on automotive items to go through on schedule in 1954. Here's what is expected: Gas and Diesel fuel taxes will drop from 2 cents to 1.5 cents. Auto and motorcycle excises, now 10 per cent, will become 7. Excises on buses, trucks, truck trailers, parts and accessories will fall from 8 per cent to 5. Complete scrapping of these taxes is not in the card at this time.

ALL MAJOR CLASSES of retail stores were recording higher installment credit totals during the summer, the Federal Reserve Board notes. Biggest gains were made in the automobile credit field. In June, for example, auto dealers reported their holdings had climbed by \$11 million in a month and by \$119 million in a year.

FARMERS' CARS CONTINUE to get a fairly tough workout when owners have shopping to do. The Census Bureau, Commerce Dept., says the average farm family travels six miles to the most convenient trading center. This is not a long haul, but about one farm in three is located on a dirt or unimproved road. Pounding over these roads doesn't improve cars eight years old, the average age of farmers' cars at the last official count.

GASOLINE SOLD AT U. S. service stations last winter had the highest antiknock rating in history, Bureau of Mines finds. More than 4,000 samples were tested for octane ratings and other factors. Peak average octane ratings for premium-price gas was 90.9 by the research method and 82.7 by the motor method. Rating for regular gas was 84 by the research method and 79.1 by the motor method.

NEW FEATURES IN U. S. customs laws are expected to assure an even keel in the U. S. retail market while overseas trade grows. Changes which became law in August were mostly technical and caused little debate in Congress. The line was held against a move to raise from \$1 to \$3 the wholesale value of foreign-made goods which may be imported without duty payment.

The U. S. Economyby Frank A. Bozek

THE END OF FIGHTING IN KOREA should mean that the living standard of the American people can be increased more rapidly. For the aftermath will increase the purchasing power of the consumer; and give a freer, wider range to the development and distribution of new products.

THE OUTPUT OF THE AMERICAN ECONOMY increases about three per cent a year. In a normal year, consumers get a large share of this increase. But when military expenditures are expanded rapidly, civilian consumers must pull in their belts. A \$10 billion cutback in military outlays would mean that it should be possible to increase civilian production by a corresponding amount.

WHEN GOVERNMENT SPENDING DROPS, the total demand for goods and services is reduced. Many feel that this will mean a slump or depression. They fail to realize that lower government expenditures mean that taxes can be reduced and people can, thus, have more money available for private spending. They also disregard the almost endless ways in which business, through research, marketing of new products, can meet the economic consequences of reduced military spending.

MILITARY OUTLAYS BEFORE KOREA totaled less than \$15 billion. In the fiscal year 1953 the total was \$44.4 billion. Because of the international situation, military spending is almost certain, even under the most favorable assumptions, to remain at a level much higher than before Korea.

A MORE OR LESS PERMANENT LEVEL of military spending somewhere in the \$30 to \$35 billion range is generally predicted. Thus a cutback to that level from the \$43 billion estimated military spending for 1954 and the reported \$40 billion estimate for 1955, would mean a gap of \$10 billion.

THE QUESTION IS: Can civilian demand be increased sufficiently to support a \$10 billion boost in production for non-military goods and services? The answer places a premium on consumer purchasing power--new and additional consumer purchasing power.

PART OF THAT NEW PURCHASING POWER needed to boost civilian demand and production is expected from tax reductions. Spending cuts after World War II were accompanied by only minor tax cuts. On the other hand, the country now is faced with a series of automatic tax reductions which will help to stimulate the economy.

THE EXCESS PROFITS TAX IS SCHEDULED to expire Jan. 1, 1954, and personal income taxes are to drop approximately 10 per cent at the same time. On April 1, 1954, a five-point cut in corporate income tax, 52 per cent to 47 per cent is due. Several excise taxes are scheduled to be reduced at the same time.

OTHER FAVORABLE FACTORS INCLUDE population growth and the trends toward a one-class market of prosperous middle-income people, more spendable income through tax reductions, larger families and more leisure time, will have a stimulating effect on the economy. By intelligent use of proper economic policies, the American economy can assure itself a most enviable future.

Report to Our Readers



They're Back Now

Most of the car driving vacationers have caught their last fish—wrung out their last bathing suit and have driven their last mile home.

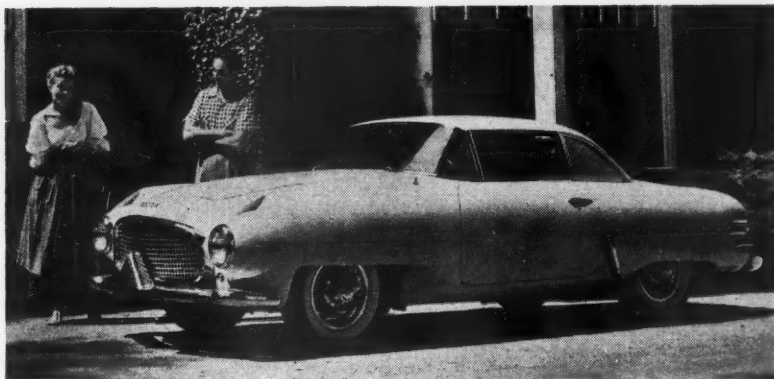
It's an American inclination to allow things to get worse before they get better—then, with a sudden urge for orderliness the buying rush is on! In the same manner the demand for automotive service looms big at times like this.

There's a fall crop of business opportunities for each of you to harvest. Brakes service is in season for vacation-worn automobiles. Cooling systems which took the constant beating of one of the hottest summers on record need attention. Automatic transmissions—with hot millions of stops and starts—may now require adjustment and oil changes. Some of those overheated engines will need a good tune-up, or better still, they may show signs of much needed complete overhaul. And there's more! If you go after it!

Equip yourself and your men with the proper working tools—both mechanical and merchandising tools—for there will be a great many car owners depending on you in the months ahead. Keep reminding your customers and friends that a car is as good as the service it gets!

Frank Tighe
Editor

NEW Scene



Hudson Italia: Car of the Future

The Italia is a closed coupe, built on a 105-in. wheelbase and powered by a 114 hp Jet engine. It has a broad wraparound "panoramic windshield." Functional air scoops are set into the front fenders over the headlights for cooling the front brakes. With only a few modifications it can easily become a family car, Hudson officials point out. They would not say when or if the Italia will go into production.

Motor Across the Water

This classy chassis travels under her own steam, as she motors across the water in this new scooter invented by German engineer Hans Hubner. The scooter is propelled by its own small motor, and promises to be a hit with aqua-enthusiasts.

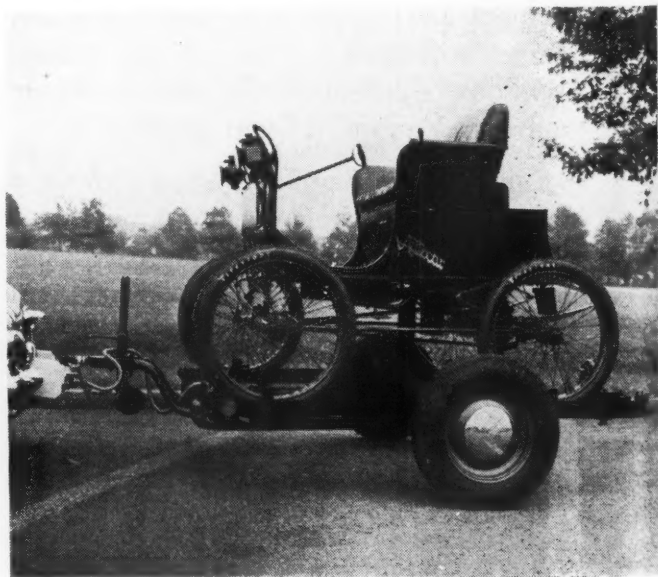


Mustard-Seed-Mobile

Robert Mustard, Wellesley, Mass., built this craft from scrap wood, sheet metal, a one-and-a-half hp motor, a bar of iron for a steering lever and a window seat from his house. The car runs 20-30 mph and averages 40-50 miles per gallon of gas.

Grandpappy Hits the Trail

This trailer was built by The Autocar Company engineers for transporting the Grandpappy of all Autocars. Above is the 1898 Autocar No. 2 (the first four-wheeler built by the firm). The trailer was designed by G. Ralph Strohl, an Autocar engineer, for taking the antique phaeton to shows around the country.





GM Essay Contest Winner

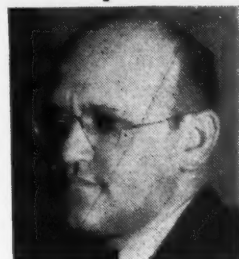
Robert Moses, left, New York City Construction Coordinator and Commissioner of Parks, is shown as he receives a check for \$25,000 from Harlow H. Curtice, right, General Motors president, at a presentation banquet in the Motor City. Moses won first prize in the General Motors Better Highway contest with a 9,000 word essay.

G—There's a Letter Missing

Motorists crossing the Mississippi River over the Lewis and Clark Bridge near St. Louis, Mo., got a good laugh out of this sign—that is, if they had a quick eye. It's a slight mistake in spelling which came out BRIDE instead of bridge.



Engineering Highlights



by
Joseph Geschelin
Engineering Editor

MANY years ago one of the prominent manufacturers of commercial engines (name on request) ran a series of advertisements entitled "Paper Horsepower vs. Real Horsepower." He was about 20 years ahead of the Horsepower Race but the story is the same today.

The three kinds of horsepower

Horsepower means many things to many people. But regardless of claims, the only thing that counts is how much you get between the tire and the road. Engineers recognize at least three distinct kinds of horsepower—indicated horsepower (Ihp), brake horsepower (Bhp), and friction horsepower. *Net* brake horsepower happens to be the thing in which you and the customer are interested, because it represents the usable power available for driving the car. From the standpoint of the engineer, it represents the difference between (Ihp) and friction horsepower.

Up to this point the reality of Bhp seems quite clear. Actually, it is not so clear because there are as many values of Bhp for an engine as there are people who build and sell engines. What is it that makes the difference and why is there confusion of claims?

Much power absorbed within engine

Friction horsepower is the key to the situation. It includes everything the engine must do to operate in a motor car—the amount of work done to move pistons up and down in the cylinder, friction losses in bearings throughout the engine, the amount

(Continued on page 143)

Bolder Use of Color Seen In Automobiles of Future

A prediction that bolder use of colors will characterize automobiles of the future was made by Don A. Seely, Automotive Division manager of the Martin-Senour Paint Co.

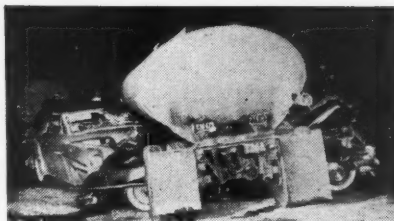
Seely noted that as late as 1951, more than 90 per cent of all cars came in the basic black, green, blue, or gray. For years, black was the leading automobile color because it could stand up to wear.

In the past two years, however, red, yellow, ivory, beige, and brown pastel shades have moved up to account for almost 25 per cent of automobile colors.

A further development in the car trend is the growing popularity of the two-tone finish. Seeley pointed out that more than 1,000 separate car colors are on the road today.

Wynn Includes AFB Races In Mechanic's Award

Gen. Curtis LeMay's Strategic Air Command, which is sponsoring major sports car meets at various Air Force Bases all over the nation, has been included in



Low Bridge

If you look closely you'll see two automobiles in this picture, one at the left and the other thoroughly crushed beneath a 76,000-pound two-tanker oil rig into which it crashed. Only injury sustained was a crushed hand by the driver of the crushed car. And miraculously, neither accident ignited the load of gasoline.

Wynn Oil Co.'s "Winning Mechanics Award" program. Gen. LeMay has staged National Sports Car Races at almost every AFB under his command.

Gen. LeMay invited Wynn's to participate in the Offutt AFB event near Omaha, Nebr., when 16 classes of sports cars saw action before an estimated 75,000 fans.

Top honor was earned by Carl Badani, who received a diamond-studded lapel pin for grooming the car driven to victory in the featured 200-mile race by Masten Gregory. Gregory, driving an XK-120-C Jaguar, averaged 76.666

mph over a tricky two-mile course.

Norman S. (Scotty) Maxwell, vice-president in charge of advertising for Wynn, handled the award presentations.

Pontiac's Model Schools Enroll More Than 15,000

Pontiac factory instructors held new model schools for 15,710 dealership employees across the country in the past 90 days, setting an all-time record, according to H. E. Crawford, Pontiac general sales manager.

In 1952, 14,192 attended the schools, a record then for attendance of any single class. This year changes in 1953 models, servicing and preventive maintenance were covered during the 655 separate sessions.

Crawford lauded dealership men for "attending night and week-end sessions to better equip themselves for service to the public, and at the same time maintaining normal work schedules in their communities."

NADA Spokesman Urges Elimination of Excise Tax

Pointing out that manufacturers' excise taxes were conceived originally as a temporary, emergency measure, an official spokesman of the National Automobile Dealers Assn. urged the House Ways and Means Committee to eliminate or substantially reduce these levies in automobile lines. (The existing excise tax rate is 10 per cent of a car's factory selling price and eight per cent of a truck's.)

Alton M. Costley, chairman of NADA's National Affairs Committee, told the tax-writing committee that "we are beginning to wonder if a crisis-inspired prop to the economy has become a lasting foundation of the country's financial structure. We ask ourselves now if a concept based on expediency has become a custom stamped with permanency."

Costley urged the committee to continue its studies and efforts to obtain other revenue-producing means which would be more equitable, nondiscriminatory, and uniform in their application.

Answer to Transportation Problems?

Leon Henderson, wartime OPA administrator, and his daughter, Lynn, demonstrate their motor-driven bicycles in a ride around the court of the Hotel Marguery. The motor can be attached to the front fork of any bicycle, American or European, and runs 150 miles on a gallon at speeds up to 30 miles an hour.



Roy Abernethy to Direct Kaiser-Willys Sales Div.

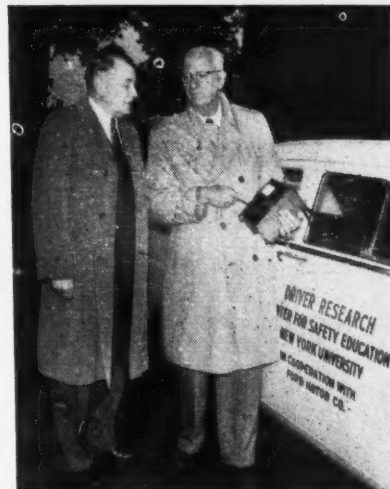
Edgar F. Kaiser, president of Kaiser Motors Corp. and Willys Motor, Inc., announced plans to expand the sales program of the two automobile manufacturers by establishing a new organization, Kaiser-Willys Sales Division, to distribute the passenger cars and commercial vehicles built by both companies.

The new Kaiser-Willys Sales Division will be directed by Roy Abernethy, who has been named vice-president in charge of sales of the new division. He joined Kaiser Motors as sales vice-president last May.

geles, San Francisco, South Bend, Kansas City, Portland, Dallas, Cleveland, and Atlanta.

Radars Studies "Driver Behavior"

Thousands of motorists may learn with surprise that they have been tracked with radar while violating local and state highway speed limits. A mobile research laboratory, presented to New York University Center for Safety Education by Ford Motor Co., will visit 10 northeastern states during the summer months as part of a scientific study of speed control aid "driver behavior." Dr. Herbert J. Stack, director for the Center of Safety Education, accepts the specially equipped car from Charles R. Beacham, Northeastern Regional sales manager, Ford Division.



1953 RETAIL CAR SALES BY PRICE GROUPS*

NUMBER OF CARS

Price Group	June				Six Months			
	1953		1952		1953		1952	
	Units†	% of Total	Units†	% of Total	Units†	% of Total	Units†	% of Total
Under \$2,000	284,387	52.76	216,497	51.45	1,536,422	53.67	1,127,404	53.03
\$2,001 to \$2,500	199,413	29.57	124,418	29.56	813,287	28.41	649,582	30.55
\$2,501 to \$3,500	71,961	13.35	61,860	14.70	391,785	13.68	263,606	12.40
Over \$3,500	23,287	4.32	18,074	4.29	121,428	4.24	85,502	4.02
Total	539,058	100.00	420,849	100.00	2,862,922	100.00	2,126,096	100.00

DOLLAR VOLUME OF SALES*

Price Group	June				Six Months			
	1953		1952		1953		1952	
	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total	Dollars	% of Total
Under \$2,000	\$506,670,848	44.24	\$382,206,793	43.01	\$2,749,975,027	45.10	\$1,989,302,743	44.62
\$2,001 to \$2,500	354,350,411	30.95	275,012,202	30.94	1,815,540,969	29.77	1,440,214,997	32.31
\$2,501 to \$3,500	197,515,454	17.25	165,623,931	18.63	1,075,076,249	17.63	714,394,436	16.03
Over \$3,500	86,510,023	7.56	65,990,146	7.42	457,430,080	7.50	313,602,737	7.04
Total	\$1,145,046,736	100.00	\$888,833,072	100.00	\$6,098,022,325	100.00	\$4,457,514,913	100.00

*—Calculated on basis of new car registrations, as reported by R. L. Polk & Co., in conjunction with advertised delivered price at factory of four door sedan or equivalent model. Does not include transportation charges or extra equipment.
†—New registrations of American made cars only. Does not include imported foreign cars.



Space Chamber?

Six-year-old Bobby Hornyak inspects a new type of space chamber, but not one projected for flight into the ether. This is a working model of a cylinder in the hemispherical combustion chamber engine of the 1953 Chrysler. With Bobby is Jack Gleason, of Memphis.

Top Studebaker Officials End Coast-to-Coast 'Tour'

Top officials of the Studebaker Corp. have completed a coast-to-coast series of meetings in principal cities to discuss with representative dealers current market conditions and future sales opportunities. Ten cities were visited.

Vance pointed out that the company for some time has been considering formation of a dealer council which would serve as a means of discussing mutual problems with dealers.

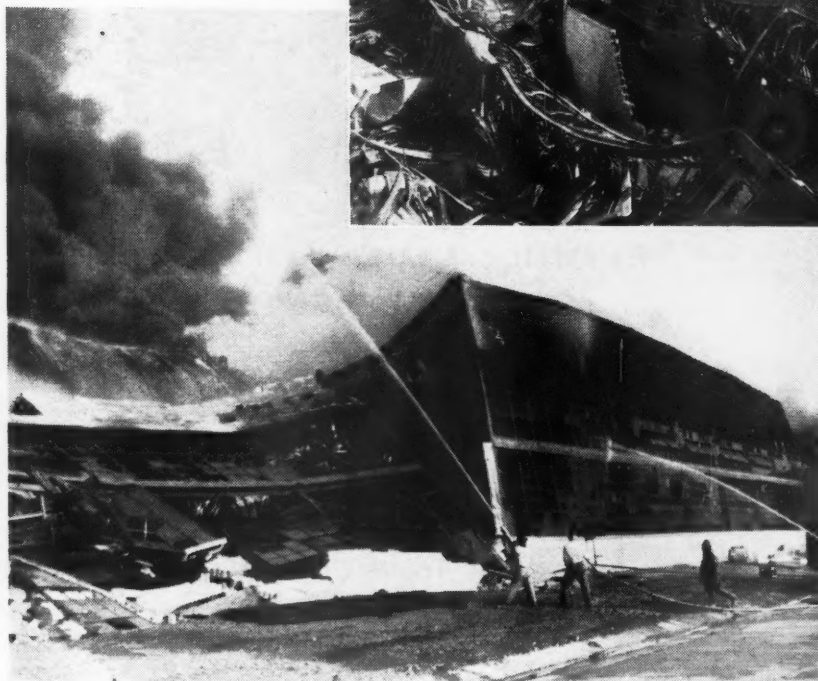
Cities where meetings were held are New York, Chicago, Los An-

1953 NEW PASSENGER CAR REGISTRATIONS*

Arranged by Makes in Descending Order According to the 1953 Six Months' Totals

MAKE	SIX MONTHS						
	June 1953	May 1953	June 1952	Units		Per Cent of Total	
				1953	1952	1953	1952
Chevrolet	137,390	129,784	85,052	670,082	446,136	23.27	20.85
Ford	72,500	90,112	68,012	475,500	354,847	16.51	16.58
Plymouth	55,405	54,207	46,888	302,369	235,355	10.50	11.00
Buick	47,526	43,549	30,474	236,744	181,469	8.22	7.55
Pontiac	42,360	38,314	27,642	203,361	134,817	7.06	6.30
Oldsmobile	35,092	31,690	21,650	168,331	113,770	5.84	5.32
Dodge	31,651	30,249	31,344	160,363	131,016	5.57	6.12
Mercury	17,768	21,317	16,686	119,468	89,663	4.15	4.19
Nash	14,031	15,076	16,769	86,540	72,256	3.90	3.38
Studebaker	17,079	19,318	15,627	84,051	89,758	2.92	4.19
Chrysler	15,307	14,771	11,902	81,555	61,518	2.83	2.87
De Soto	11,717	11,620	8,872	62,595	47,608	2.17	2.22
Cadillac	10,324	9,726	8,301	56,461	42,017	1.96	1.96
Packard	7,710	7,725	7,553	44,539	35,309	1.55	1.65
Hudson	7,348	7,541	8,300	38,556	40,369	1.34	1.89
Willys	3,942	4,521	4,414	27,355	17,724	.95	.83
Lincoln	5,010	4,596	2,807	21,563	12,476	.75	.58
Kaiser	2,657	2,559	3,951	15,438	19,797	.54	.93
Henry J.	1,142	1,000	4,035	7,069	17,488	.25	.82
MG (British)	752	730	831	3,998	3,232	.14	.15
Hillman (British)	502	408	428	2,563	2,096	.09	.10
Ford (British)	334	303	332	2,295	1,805	.08	.08
Jaguar (British)	381	339	266	2,156	1,337	.07	.06
Austin (British)	284	275	413	1,942	2,523	.07	.12
Allstate	100	57	171	421	738	.01	.03
Misc. Domestic	221	215	347	1,181	2,705	.04	.13
Misc. Foreign	660	593	388	3,489	2,048	.12	.10
Total—All Makes	542,193	540,575	423,655	2,880,025	2,139,975	100.00	100.00

* Based on data from R. L. Polk & Co.



Smouldering debris and twisted wreckage are all that remain of the worst disaster in automotive history at General Motors transmission plant at Livonia. Fire was a \$40 million loss.

Billowing clouds of smoke soar skyward as firemen play jets of water on raging fire. Heat buckled walls, caved in roof. Some machinery was salvaged.

GM Rolls Up Its Sleeves

After Devastating Fire

In traditional fashion, General Motors arose to meet this latest challenge. Subcontracting and acquisition of temporary quarters at Willow Run enabled GM to keep production up.

by Leonard Westrate,
Detroit News Editor

GENERAL MOTORS is performing a modern industrial miracle following the disastrous fire which wiped out its entire Hydra-Matic production at its nearly new plant at Livonia, Mich., August 12.

With characteristic vigor, GM moved in while the ruins still were smoking and within a few hours salvage operations, plans for resuming production on at least a limited basis, and temporary expedients for keeping Cadillac, Oldsmobile, and Pontiac production going were under way.

(Continued on page 114)

Letters

TO THE EDITORS



A Clarification

Our article "Counterfeit Parts Can Cost Plenty," which appeared in our August issue, has provoked comment from several well known and reputable independent replacement parts manufacturers who have asked us to clarify the use of the word "counterfeit."

All concurred with our caution to all members of the industry to avoid handling or using parts which might possibly have been stolen or inferior counterfeit items packaged and sold under reputable and advertised brand names.

However, we are anxious to point out to our readers that quality parts manufactured by reputable independent replacement parts manufacturers were certainly not intended to be considered in this category.

We should further like to point out that the illustration which accompanied this article only intended to show certain parts which were known to have been actually counterfeit. Many reputable quality parts include certain of these methods of manufacture.

Summing up, we agree with all who wrote in to us that any quality product merchandised under the manufacturer's accepted trade name is a legitimate part.

Some Details About Model Designations on Fords of Fifty Years Ago

Editor, MOTOR AGE:

In the June, 1953, issue of MOTOR AGE you show a picture of what is, to my mind, a 1903 or 1904 Ford. If my memory is right Ford Motor Company manufactured the "Model O," and the Models "N," "R" and "S," prior to the Model "T," somewhere between 1906 and 1908 or '09. I could be wrong, so please advise me. J. E. Black, 16 Lakeside Street, Sumter, S. C.

We checked with the Ford Motor Company and received the following information from the Ford Archives.

The six cylinder Ford was known as "model K," which was available from March, 1906, to March, 1908. The "model K 640" roadster was also manufactured and was available from March, 1907, thru July, 1908. Models "M," "R," and "S" were available during the following periods: December, 1906, thru September, 1908; April, 1907 thru July, 1908;



and March, 1908 thru September, 1908. They assure us that we have correctly identified the picture shown here which was used in the June, 1953, Motor Age. This was never a production Ford car, but was built by Henry Ford from early French patents and used in the Selden Patent Case.

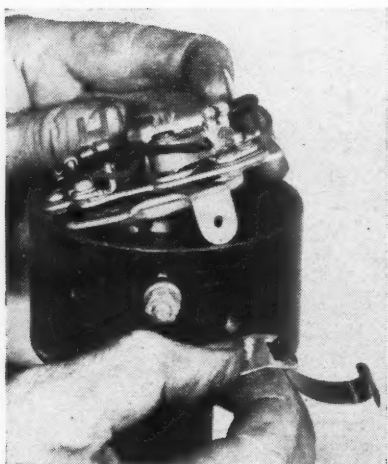


Fig. 1—Remove the two cap clips and loosen the primary post.

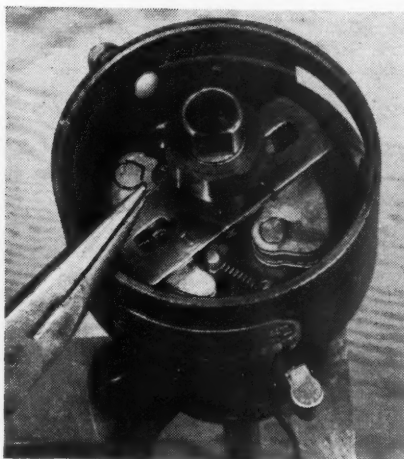


Fig. 2—Remove the lock spring which holds the cam in place.

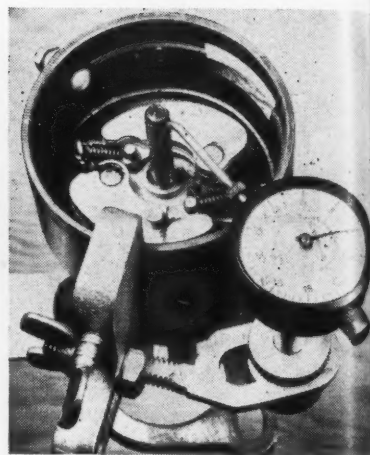


Fig. 3—Mount dial gage on housing to check distributor shaft wear.

Overhauling The Auto-Lite Double Breaker Distributor

THE Auto-Lite distributor, which is used on Chrysler, De Soto and Dodge V-8 models, is a double-breaker unit. It is easily serviced as shown here.

Remove the distributor from the engine and clean it thoroughly with a suitable solvent. It is advisable to remove the distributor for renewing points or for making any repairs so that it may be properly calibrated on the bench tester. It should be checked about every 10,000 miles to insure efficient operation.

Always check the vacuum, centrifugal advance, and the point spring tension and set them to manufacturer's specifications.

Breaker points can be set by using a dial gage or with feeler gages. When setting points with a dwell meter, one set of points should be blocked open with a clean piece of insulation, inserted between the contacts, while

adjusting the other set to 27.5 degrees on the meter. Next adjust the other set to obtain a total dwell of 34 to 36 degrees on both points.

If the dwell meter shows 27.5 degrees to 30 degrees for one set of points, with a specified gap of .015 to .018 inches gap or a total dwell of 34 to 36 degrees, the distributor is in good condition. If dwell angle is not within specifications or the dwell needle is erratic check for the following conditions: worn rubbing block bent, rubbing block not square with cam, or worn drive shaft bushings.

When installing new points the spring tension should be adjusted. The adjustment is made by hooking a spring scale on the arm at the point end and pulling at right angles to the point surfaces. Take a reading as the points start to separate. The correct tension should be 17 to 20 ounces.



Fig. 4—Bend ears on the cam plate to adjust the centrifugal advance.

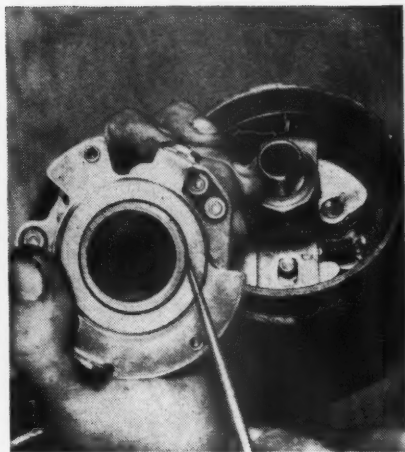


Fig. 5—Examine the breaker plate bearing for wear and lubricate.

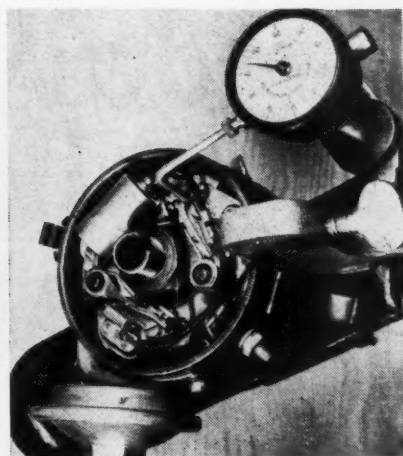


Fig. 6—Adjust point gap with dial gage. Note special jig to hold gage.

by Jack Montgomery
Technical Editor

The double-breaker feature of this unit, which is used on Chrysler Product V-8's, is the main change from the previous distributor design



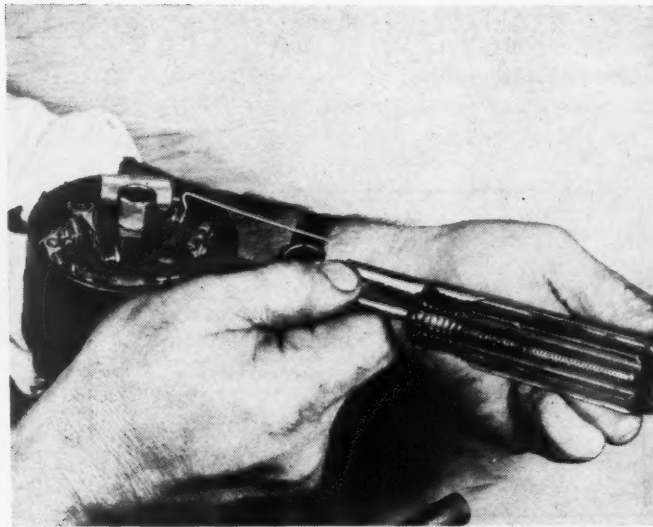
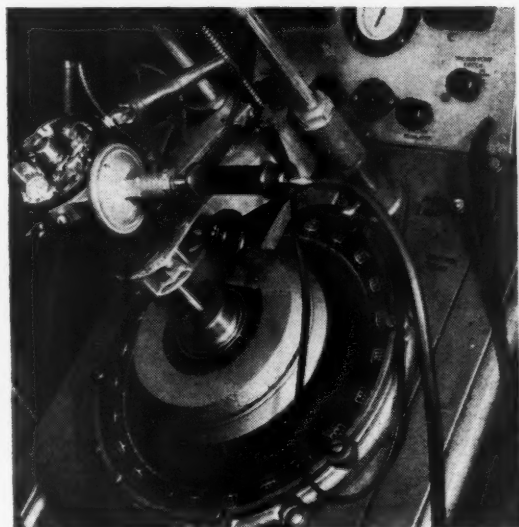
Fig. 7—Lubricate cam with soft grease and apply a few drops of oil to felt.



Fig. 8—To adjust the vacuum advance, remove or add shims as shown.

Fig. 9—Make final adjustments and checks on a bench tester.

Fig. 10—Adjust moveable point tension with the use of a spring scale.



ideas in action




Show Piece Appears in Parades

A real show room piece, this ancient vintage 1915 Detroit Electric serves as an invaluable advertising medium for the Bearcat Battery and Tire Service, Windsor, Ontario. It appears regularly in parades and, on occasion, offers a real thrill to preferred customers who are given a ride in it. It goes about 30 miles on one battery charging.

A Striking Resemblance Pays Off

The friendliest automotive serviceman in the city of Hastings, Nebr., is a man with the most striking resemblance to our former president, Harry S. Truman. Scores of people have driven out of their way to check up on D. D. "Harry" Tarr, our ex-president's double.

During Mr. Truman's administration, they exchanged autographed photos. Mr. Truman's picture hangs above the door of his office for all to see. Although they have never met, Tarr intends



*This is not the X-President,
BUT*

D. D. TARR
PROPRIETOR OF
Tarr's Service
325 North Hastings Ave.
HASTINGS, NEBRASKA
Telephone 2-6932

•
PROMPT EFFICIENT SERVICE
S & H Green Stamps
(Over)

to visit Mr. Truman when he goes on vacation this year.

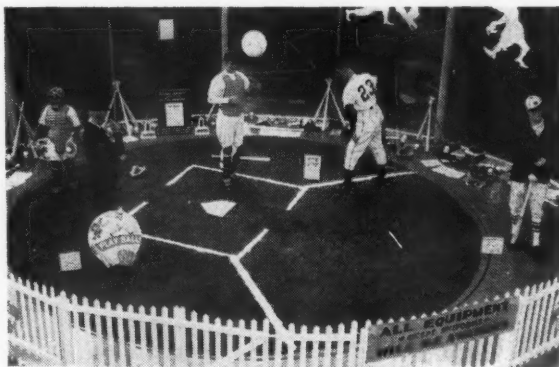
As an advertising follow up, Tarr had business cards made up, stressing the resemblance between the two. His cards are spread all over the United States, Canada, England, and even as far away as Korea.

He has had write ups in numerous papers and keeps an up-to-date scrap book on publicity which he has received.

Displays That Attract Customers

One of the most fascinating eye-stoppers in Phoenix, Ariz., is the display window of the Stewart Motor Co. Since 1949, the operators of this Studebaker agency have used a specially-designed front window as a customer catcher.

Displays follow no particular theme, but advantage will be taken of certain seasons and of certain campaigns under way. During the major league baseball convention, a diamond was arranged. Mannikins were borrowed and dressed in the uniforms of big league players. Telephone calls to sporting goods manufacturers brought considerable equipment which was used and later given away as prizes. A soft drink company flew a special fountain from Columbus, Ga., and about 10,000 cold drinks were dispensed to the kids who flocked to talk with some of the old-time major leaguers.



Typical of other displays was a Studebaker surrounded by license plates from various states. Every day, new plates were shown and people flocked into the agency inquiring why their state plates were not shown.

One of the displays, a waterfall, entered in an international contest of automobile dealers, won a gold medal.

Jack Stewart, owner, and Stan Gray, sales manager, are convinced that the displays, created and engineered by Harold R. Hokanson, Phoenix promotion man, really pay off.

MANAGEMENT CLINIC



Take Inventory on Insurance, Too!

HAVE you enough insurance on your building? Russ Shear, an independent repair shop operator of South Beloit, Illinois, thought he did when he took out a \$7,500 policy a few years ago. A thirty-minute blaze wiped him out, even though he thought his building was fireproof. The loss was conservatively placed at \$30,000, but no estimate of damage was made because the insurance company wasn't interested, after paying off only a fraction of its value.

Perhaps Shear's experience sounds remote, but the setting and the events before the fire may be familiar to a lot of shop owners.

Shear was in business with a nephew, who sold out to Russ in 1945. Russ's business continued to thrive both in the garage and salvage yard. He added equipment as he expanded, but he didn't add any insurance. Russ had a good insurance man, who didn't want to high-pressure him and saw no reason to increase the amount. Both agreed that only the doors and roof could burn in case of fire, because they were the only wooden construction in the entire building.

Shear's stock was growing. He was warned about a possible shortage of anti-freeze solutions so he put in an extra heavy supply. He got a "good buy" in canned oil and bought up extra cases. Shear also had so many tires that he can't recall the number, over

(Continued on page 156)

It's surprising how a shop accumulates equipment, parts and accessories over the years. Insurance policies should be increased, too, to give proper coverage

by Frank Reichstein

This pile of rubble is all that remains of Russ Shear's shop after a thirty-minute fire. It wasn't until the smoke cleared that Shear discovered how inadequate his insurance policy was.





Above. A cluttered analyzer gathers dust and dirt, should command a more prominent place in the shop.

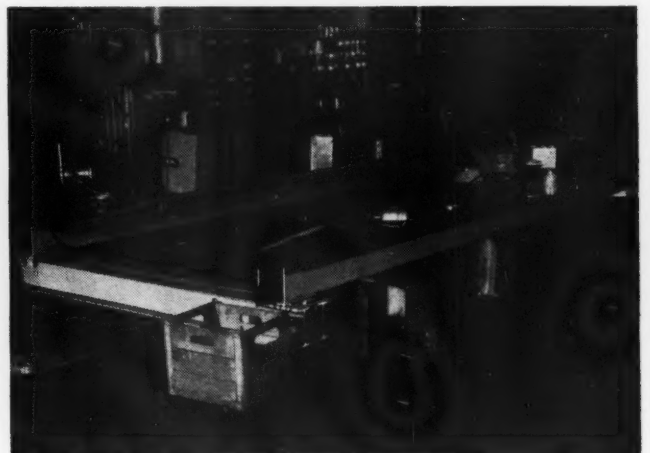
Left. Inspector Jones unearths a distributor tester hidden in an out-of-the-way place in the shop.

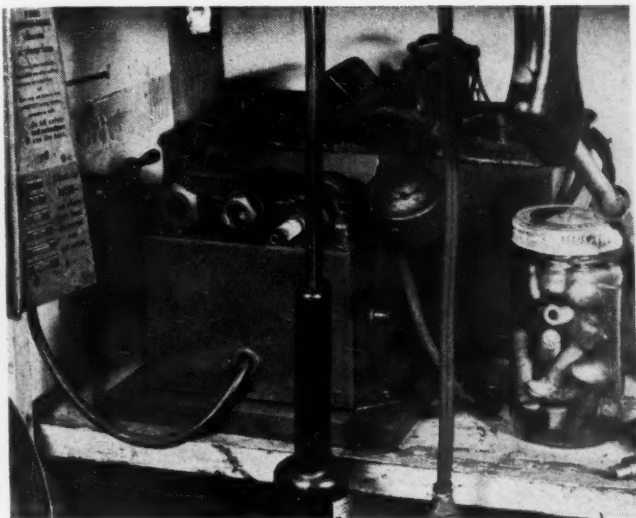
Inspector Sherlock Jones Unearths Missing Equipment

Here's a vacuum gage found buried in a drawer with mechanic's tools. Should be displayed on a board.



This front end rack may make a handy bench for odds and ends, but where are you going to check the car?





Above. This spark plug tester is seldom used and offers little inducement to prospective customers.

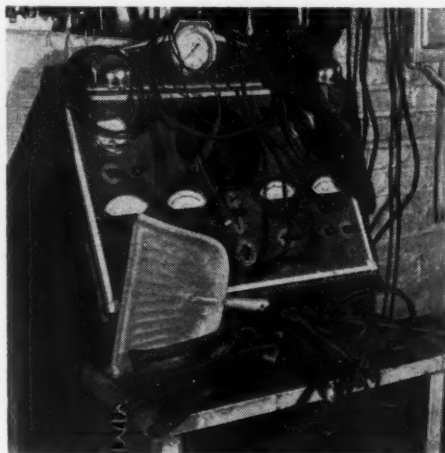


Right. A brake drum lathe, unused for months, is bound to end up in the "missing equipment" file.

**Inspector Jones pulls an early morning raid and uncovers
a case of negligence and mistreatment of shop equipment**

Profits

Electrical test bench with badly frayed leads ends up in poor condition.



ONE of Inspector Sherlock Jones' most common cases involves a shop operator or a service manager who thinks he's been robbed. At the end of the month he knows that the shop should have made more profit from engine work, tune-up, or alignment than it has, especially considering the amount of equipment that they have on hand. But the profits aren't there. What, he wonders, could be the reason!

The Inspector, in looking for clues, learned that what should have been the shop's biggest assets were actually liabilities. Various pieces of test equipment, the valve grinding machine, alignment rack, and so forth, were not properly used or displayed. They were hidden under piles of debris, taking up space, and adding little, if anything, to the efficiency of the shop. It happens all too often—a fine new piece of equipment is bought because the service department can see where it will save time on a job and help to do it better, but as time goes on the equipment is pushed over to a wall and used as a coat rack. Its gleaming baked-enamel cabinet no longer serves as a merchandiser. Its dials are no longer permitted to serve their purposes. It

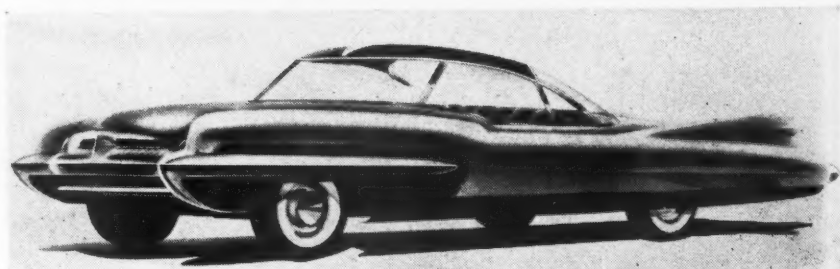
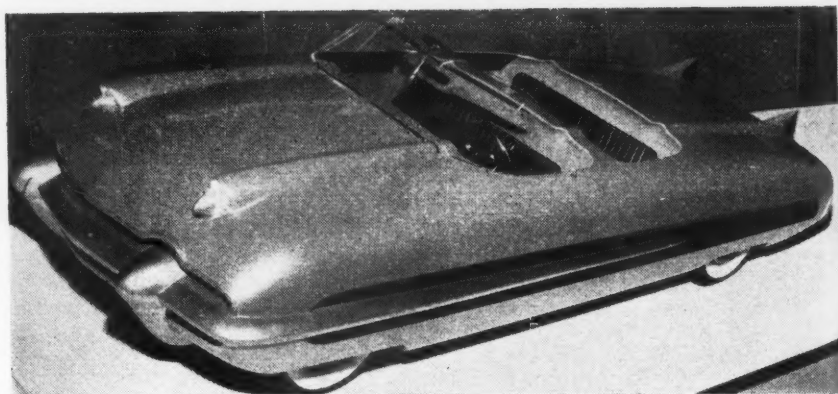
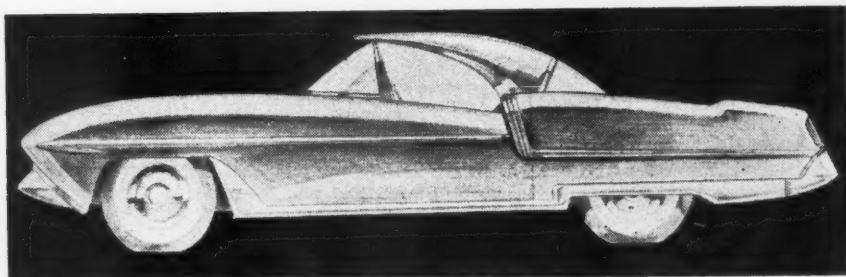
(Continued on page 154)

Today's Ideas on

LOOK into the crystal ball of tomorrow's styling trends, and you might see cars something like the ones shown here. These futuristic impressions were taken from the styling boards and model shops of General Motors, Chrysler, Ford and Packard styling sections. While they do not represent any specific plans for changes on production models, they do indicate the trend toward more extensive use of glass, lower contours, sweeping lines and a combination of bumper and grill. In a highly competitive, fast-moving industry, they may be here sooner than you think.

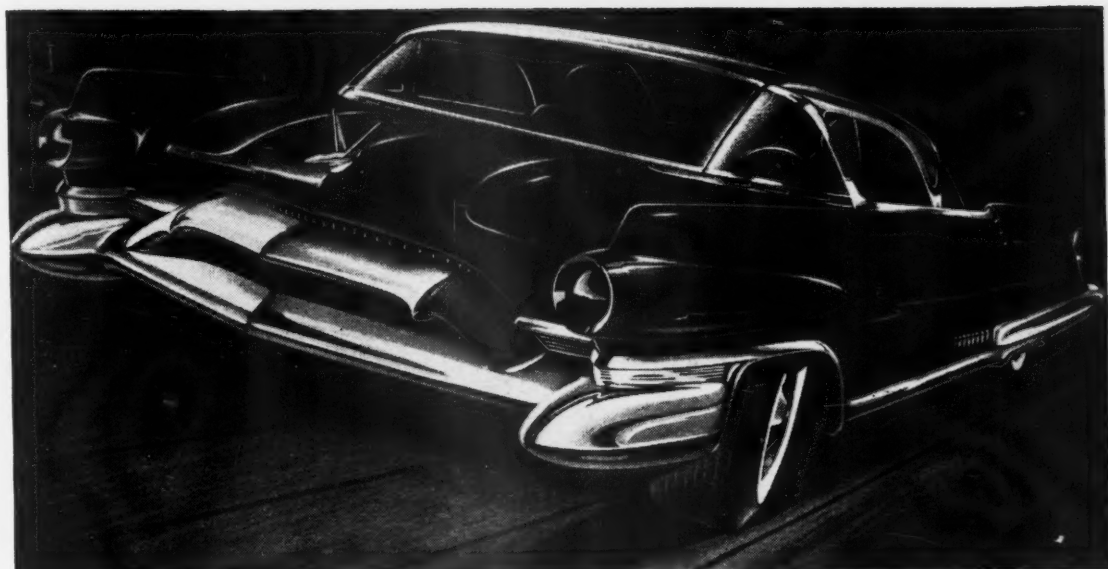


Tomorrow's





Styling

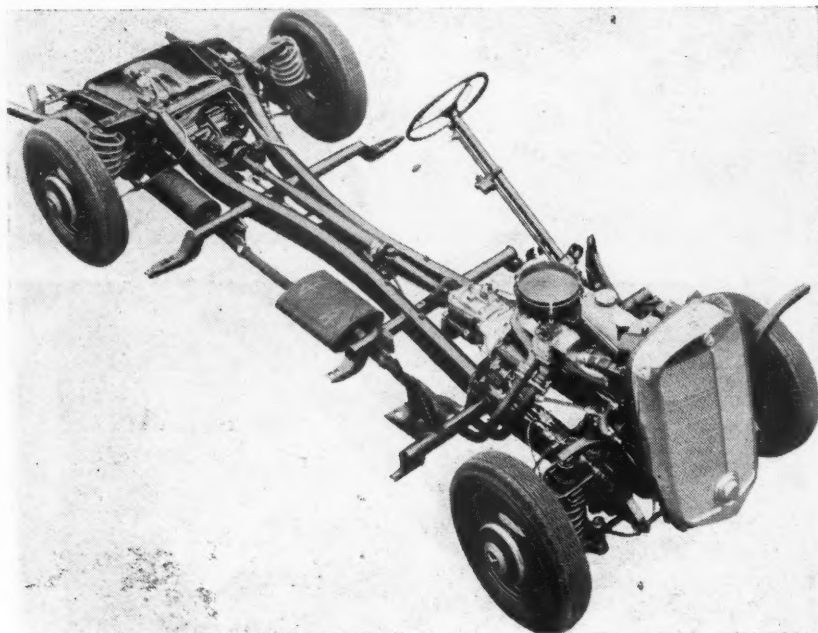


CI The MOTOR AGE *Showroom*

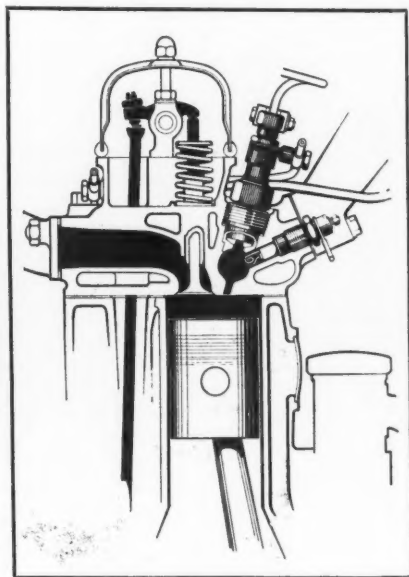
Mercedes-Benz Powered

A tubular frame, all-wheel independent suspension, and a Diesel engine

The Mercedes-Benz chassis consists of seamless steel oval tubes. The rear swing axle has a hypoid type differential. Note the double coil rear springs.



This sketch of the Diesel combustion chamber shows the fuel injection nozzle and, at the right, the glow plug for starting.





by Diesel

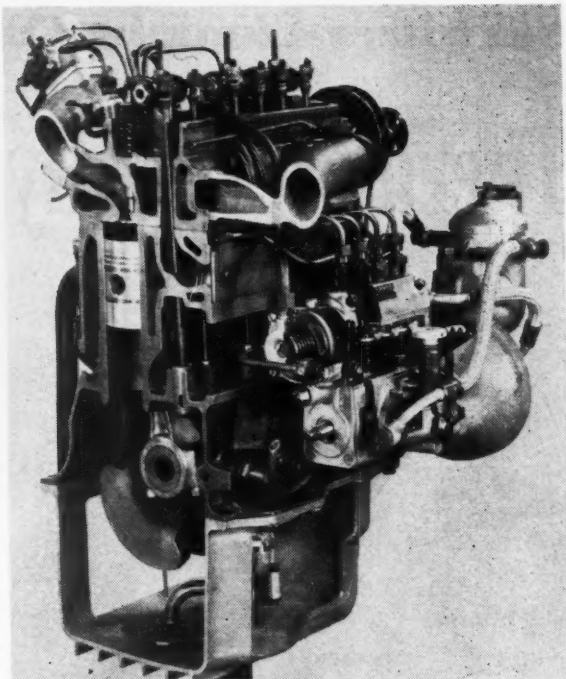
make the 170DS most unusual

by Arthur H. Nellen, Jr.
Managing Editor

ONE outstanding reason for the popularity of foreign cars in this country is the fact that they're different and, from the engineering standpoint, one of the most unusual foreign cars on the American market is the Mercedes-Benz 170DS. With respect to styling, the car is quite standard in its continental appearance, but mechanically the 170DS is quite unconventional.

It features a compact four cylinder overhead valve Diesel engine which develops 40 bhp at 3200 rpm. Typical of a Diesel, compression ratio is 19 to 1 and fuel injection is used instead of conventional carburetors.

Economy is one of the main features of the Mercedes-Benz Diesel. The factory claims a normal field consumption of 38½ miles per gallon, and Diesel fuel, of course, costs much less than gasoline.



All of the main working parts of the 170DS engine are shown in this cutaway view. The injector pump is seen at the right.

From the standpoint of service, the factory claims that the car can go 100,000 miles without any other than minor maintenance. With no spark plugs, distributor, coil, or carburetor to service, the car should be able to live up to the economy claims made for it.

Chassis parts should also stand up well, since every part which would normally require routine 1,000 mile lubrication is lubricated every hundred miles by a foot-operated pump. The lubricant is carried to every vital part of the car, so that before any appreciable wear takes place, it's time for another "lube job." This is done while the car is in motion. All that is necessary is for the lubricant reservoir to be filled periodically.

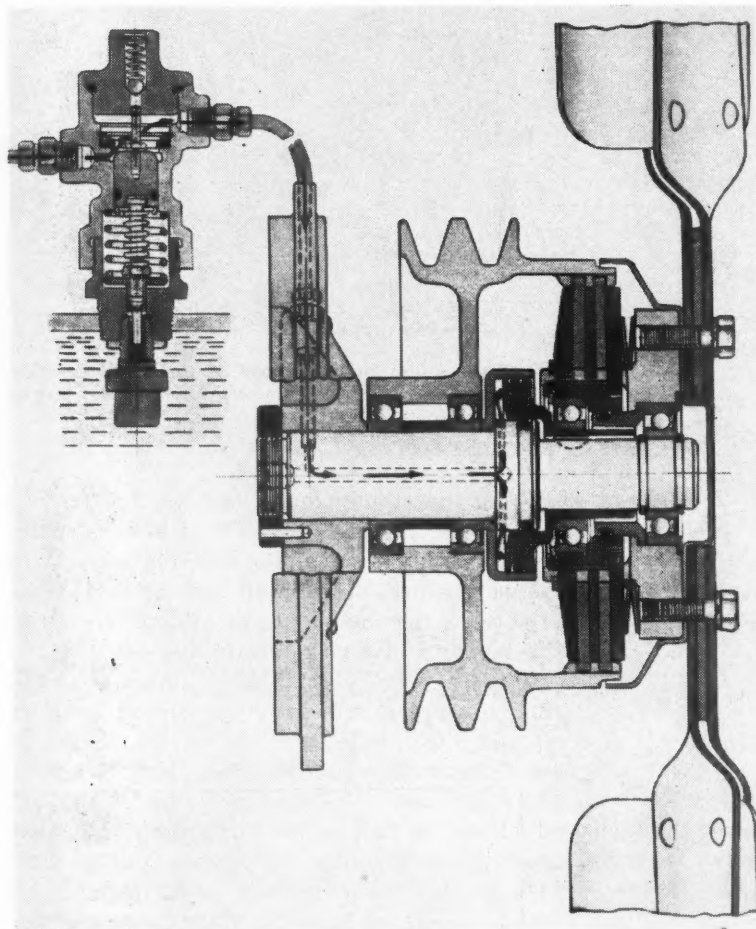
Starting a Diesel engine is almost as simple as starting a conventional gasoline engine. On the instrument panel there is just one lever extra, which, before starting the engine, must be turned until a little red lamp glows. This indicates that the glow plug is heated up enough to start the engine when it is turned over. Once the car has been started, if it should be shut off again for a short time, it is not necessary to relight the glow plug.

An interesting part of this car is that it can be driven at a maximum speed of 62 mph

(Continued on page 150)

Schwitzer-Cummins Announces

Thermostatically Controlled Fan



This cross-sectional view shows how the fan drive operates. The thermostatic control unit, at the upper left, permits pneumatic or hydraulic pressure to engage the fan when the engine water temperature reaches a certain point

Advantages claimed for this drive, which disengages the fan when cooling is unnecessary, are increased power, better economy, and quicker warm-up. Engine water temperature controls operation

TO maintain coolant temperatures in heavy-duty engines at an efficient operating range, Schwitzer-Cummins has designed and built a fan drive that is thermostatically controlled. The drive utilizes a built-in multiple disk clutch, normally engaged by spring pressure, turning the fan with the pulley. When cooling air is not required, hydraulic or pneumatic pressure, regulated by a special thermostatic control valve, automatically disengages the fan.

Called the Thermatic fan drive, the unit permits an increase in engine horsepower up to 10 per cent when the fan is disengaged from the engine. According to Schwitzer-Cummins engineers, fuel savings up to 10 per cent are claimed to be obtainable when using the thermostatically controlled fan. Another feature of the drive is that it permits more rapid engine warm-up.

Two major sub-assemblies—the pulley hub assembly and the fan hub assembly—make up the basic fan drive. Each of these is mounted on its own bearings. The fan hub assembly, which is inserted into the pulley hub, includes the clutch.

Splined internally, the pulley hub is in constant engagement with the externally splined friction disks of the clutch. In locked up position they engage the steel friction plates, which in turn drive the fan hub through their tongues projecting into the slotted, extended portion of this hub.

Two springs—dished washer type—keep the clutch normally in locked up position. When the

(Continued on page 102)

Clever Ads Bring Them Into

Commercial Automotive

"Commercial Automotive" has become a household expression in the Seattle area, as a result of this dealer's intensive advertising campaign

by Edward R. Lucas

TRAFFIC is the immediate objective of the diversified advertising program of Commercial Automotive Service, Inc., in Seattle, Wash. If an automotive dealer has traffic through his plant, president Frank L. Hawkins believes, he has dollar volume in car sales, service, parts, tires, and any other merchandise which he may handle.

The company has succeeded in attracting traffic to its service shops and display rooms in spite of its location. The plant is located on

(Continued on page 130)



These direct mail postcards, each of which measures 8¾" by 5¾", represent one of the several advertising media which have helped to bring in customers.

Advertising doesn't stop when the car owner enters the shop. Attention-getting signs are spotted around the building.





Aiken's shop, which is affiliated with an oil company, has its self-service feature well advertised on a prominent street.

The Customers Do the Work



Hot rods, motorcycles or stock models, they're all brought in to Aiken's shop at one time or another. Most customers are of the younger set.

Aiken (right) keeps a good stock of parts and accessories on his counter, since customers find the shop a handy place to install spot lights, heaters, and so forth.



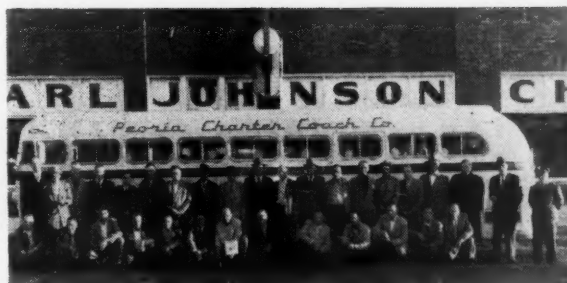
They rent working space and tools, buy parts and accessories in this "self-service" shop

by Bill Nichol

MOST repair shop operators and dealers today are concerned with future trends and how they will be effected. Jack Aiken, Milwaukee man with 18 years' experience in the business, is one of them. He saw an article in a trade publication relative to the opening of a self-service shop which eventually did an unusual amount of business. He felt that the idea sooner or later would interest some one in his area, so he might as well get in on the ground floor by creating one himself. It took nerve, inasmuch as Milwaukee is noted for its ultra conservativeness.

Nevertheless, Aiken knew that the only reason the average chap drives an old "jalopy" badly in need of repairs, is due primarily to the absence of ready cash with which to put the heap in first-

(Continued on page 108)



A day at the ball park rooting for the home team is one of the many affairs initiated by Johnson for his staff.

A novel innovation of Johnson's Christmas party is that he allows employees to select their own gifts.



How Johnson Holds His Help

Solving employee turnover problems constitutes a full-time program ranging from incentive plans to advice on personal problems . . . by Harry L. Spooner

EARL JOHNSON, Chevrolet dealer at Peoria, Ill., has solved the help turnover problem. Of his 22 mechanics, their present periods of employment range from 2 to 25 years. The reason why his help stay year after year is because of his payment plan, plus extra concessions they get throughout the year.

In addition to the regular hourly wage, every mechanic gets a bonus on a sliding scale. Those who produce \$400 per month of customer labor sales receive a bonus of 7 per cent. For \$425 sales, they get 8 per cent; for \$450 sales, 9 per cent; for \$475, 10 per cent. Then there is a large increase, with \$500 sales bringing 15 per cent. "We want all our men to be \$500 producers and they all are," says Mr. Johnson. For \$525 sales, they get 16 per cent bonus and for \$600 sales, they get 20 per cent. Many of the men reach the \$600 mark. The bonuses are paid at the end of each month, and one bookkeeper takes care of all records.

"We have several men who have been with us

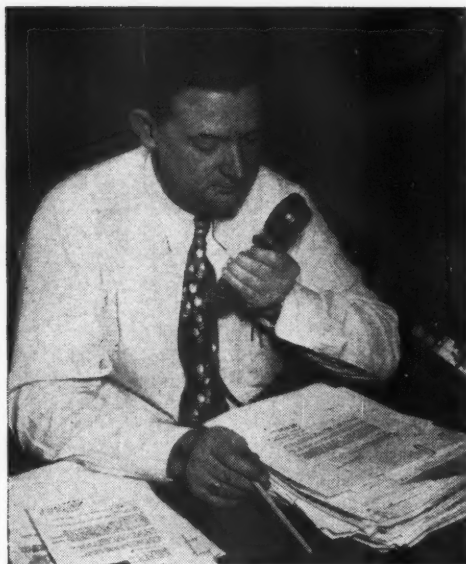
for 25 years. By our bonus plan they make from \$2 to \$2.20 an hour. Our men are perfectly satisfied with our bonus plan and they work for our interest and their own whether we are here or not.

"Office help are paid a salary and at Christmas time get an extra bonus regulated by the amount of salary they each get."

"Salesmen are paid enough salary so there is no trouble with them, either. They are all satisfied. While we do not keep open nights or Sundays, our salesmen bring prospective customers to the store during this time when it is not convenient for the customer to come during the regular hours. Although they get straight salaries, they try to make a good record selling cars.

"Salesmen do get an extra bonus for selling trucks. If they sell 20 trucks a month, they get 4 per cent extra. The foreman gets 4 per cent on all he sells himself and 2 per cent on all the salesmen sell."

(Continued on page 152)



by Jack Montgomery, Technical Editor

- Pontiac Distributor Cap Burns
- Erratic 24-Volt Generator
- Gas Gage Trouble in Pontiac
- Kaiser Burns Exhaust Valves
- Cause for Cupping Tires.

'50 Pontiac Distributor Cap Inserts Burn in Week's Time

A 1950 Pontiac "8" just about has me at the end of my rope with its electrical troubles. Here's what I have done to try and get it in shape so far: replaced the high tension wiring, checked all the wiring and hook-up all the way through, installed a complete new distributor, checked the coil and generator, and set the voltage regulator.

Now here's what I have run into: the distributor cap inserts burn on the inside, about a quarter of an inch on each side—no cracks, just burns after about a week's operation (the old distributor did the same). Until the cap burns, it has plenty of pep and power and starts easily, gives good gas mileage.

A voltage regulator lasts only about four months. The present regulator was taken off and checked; it tested out fine and was set while hot. When installed and checked, I found a voltage increase of about twice what it should be with a fully charged, brand new battery. Battery cables show no drop at all; all wiring was checked as well as the generator in the car. Where possible, the wiring was taken off and the terminal scraped, just to make sure.

D. R. Gladish
Cape Girardeau, Mo.

I'VE never heard of a car doing all the things that yours does, especially after all the work that's been done on it. If the distributor cap is burnt, I would say that it is

READERS'

TROUBLE

due more to dampness than to anything else. I would suggest shielding this cap by installing a boot around it. This may help that condition. As far as the voltage regulator goes, I would suggest that you check the field wire from the generator to the regulator. If this wire is shorted, it will cause the generator to put out its full capacity at all times. I was wondering whether the ammeter shows a full charge or drops back like it should. I would also check the engine ground strap to make sure it is in good condition.

Erratic Charging On 24-Volt Generator

We have a generator in our shop that charges and then won't charge. It is a 24-volt unit, used on a Buckeye earth shovel. The generator will charge perfectly on a test bench at our shop and at two other shops that do nothing but handle generator work. We did everything in the book to make the thing work. The owner purchased a new armature and voltage regulator. But it will not charge when you mount the generator on the engine. We ground the regulator back to the generator and also ground the regulator back to the engine to insure good ground. Took the battery current out completely and still no luck. Please advise us what to do.

William King
Bonduel, Wisconsin

SINCE everything tests all right on the test bench, it is unlikely the trouble exists in the generator or the regulator. I would suggest

FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S

CLEARING HOUSE

SHOOTING PROBLEMS

polarizing the generator after it is installed on the engine. This is done by momentarily bridging between the Bat. and Gen. terminals of the regulator to cause a surge of current through the generator.

'40 Pontiac Gasoline Gage Reads $\frac{3}{4}$ When Tank's Full

I am having trouble with a 1940 Pontiac gasoline gage. It never shows more than a $\frac{3}{4}$ tank of gas, even when the tank is full. I shorted it and then it showed full on the dash. A new gage has been installed in the tank, but it works the same as the old one.

William Weegan
Weegan's Service Station
Freeport, Ill.

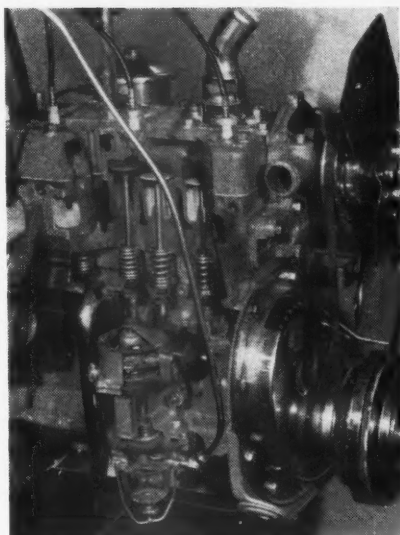
YOUR trouble probably is in the dash gage or in the wiring from the tank up to the dash. A quick check can be made by disconnecting the tank wire from the dash unit. Then connect a new tank unit, using new leads. Ground the tank unit and move the arm up and down, observing the dash gage reading. If the gage operates O.K., then trace the wires from the tank to the dash.

Exhaust Valves on Kaiser Burn After 5,000 Miles

I would like some information on how to make Kaiser engine valves last longer without a valve grind. I have two that can't get much over 5,000 miles before the exhaust valves burn. I have tried increasing the clearance and tapered the seat

more than the face, but they still burn.

Charles Grimmer
Chuck's Garage
Grenada, Calif.



THERE are several things that you might check, such as overheating, lean carburetor, clogged exhaust system or weak valve springs. Also, make sure that the water distributing tube in the block is in good condition and that the inside of the block is not coated with lime deposits. In any case, the inside of the block should be thoroughly flushed.

Reasons Why Front Tires Cup In on Sides of Tread

I am very interested in the reason why some tires on the front of automobiles wear out a cup on either side of the tread. These tires are in perfect balance with the new-

est type wheel balancer. The caster, camber, and toe-in are in line with factory specifications, yet this condition will appear after 5000 miles. This hole does not rotate around the tire as if the wheel were out of balance. This trouble does not appear very often but I am anxious to know the cause of it.

J. B. Council
J. B. Council's Garage
Hallsboro, N. C.

THE condition of your tires could be caused by one or quite a few things. Sometimes, uneven brake adjustment, grabbing brakes, or possibly unbalanced drum or even a faulty shock absorber may be the trouble. I think you will find that in most cases, when this wear is noticeable, even after correcting the condition, the alignment will not stop it from future wear, for it cannot prevent a tire from wearing once it acquires the flattened, cupped spots. So when this job is corrected, the tire should be removed and put on the rear and should even itself out.

A cupped tire, to a certain degree, straightens itself out when on the rear wheels because it is rigidly mounted to the axle shaft. It can only involve, first, the driving, and then the braking strain.



MOTOR AGE FLAT RATE AND SERVICE MANUAL

Service Suggestions

From the Factories

Correcting Front Seat Squeaks on Chevrolet

Correction of front seat squeaking which develops at the points of contact between the front seat side panels and the leather type trim on front seat cushions and backs may be accomplished by careful lubrication with a grease stick. (1) Pull the cushion away from the seat side panel and carefully apply a light coat of grease stick, or its equivalent to the inner edge of the side panel. Do not apply lubricant to the crown of the panel. Lubrication must be held to a minimum to prevent soiling the contacting trim on the passenger's clothing. (2) Repeat this operation at the front seat upper panel and seat back.

Use Correct Tank Unit in Gas Gage System on Studebakers

Due to the different shapes of the gasoline tanks used on 1953 sedans and those used in 1953 coupes, the gasoline gage tank units are different. This difference is in the shape of the float and the actuating lever arm to which the float is attached.

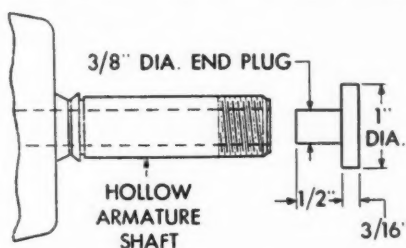
The correct tank units are:

Part No.	Part Name	For Body Style
532261	Tank Unit	C (5-pass. coupe) K (Hard Top)
525548	Tank Unit	W (4-door sedan) F (2-door sedan) Y (Land Cruiser)

Avoid Damaging Hollow Shaft Of Armature on Cadillacs

When disassembling the generator on 1953 series Cadillac cars, exercise care in order to avoid damaging the hollow shaft of the armature. Pounding on the shaft when

removing the pulley or drive end frame may result in loose arma-



ture laminations, shaft expansion, thread damage, or a brinelled drive end bearing.

When difficulty is experienced in removing the pulley or drive end frame, a puller should be used with a wooden plug inserted in the end of the shaft. A plug may be made to the dimensions shown in the figure.

Turn Fitting Finger Tight On Oil Pump Dry Seal

To prevent cracking a Chevrolet block when installing the oil pump pipe tapered dry seal fitting on partial engine block assemblies (short blocks), excessive torque on the fitting should be avoided. The fitting should be turned finger tight, then advanced one full turn with a wrench for correct installation.

Eliminating Tapping Noise On Chrysler V-8 Engines

Occasionally, a tapping sound may be encountered in a Chrysler V-8 engine when the engine has reached high operating temperature and is at idling speed. The tapping sound is very similar to and may be confused with a hydraulic valve tappet noise and is most audible at the Full Flow filter cover. The tapping sound will usually cease when the engine rpm is increased slightly.

A reduction in size of the bleed hole in the base of the Full Flow filter mounting pad from 3/16-inch to 1/32-inch has entered production; reducing the bleed hole size has been found to eliminate the tapping sound.

Should this tapping sound be encountered on earlier production engines, the smaller diameter hole may be incorporated in the filter by doing this: (1) Remove Full Flow filter assembly from engine. (2) Remove the bleed valve plug, bleed valve and spring from the side of the filter body mounting pad. (3) Cover the oil inlet and outlet holes with masking tape to

(Continued on page 126)



A traveling lubrication department has helped this California dealer with fleet accounts. Periodic maintenance and minor repairs are made in the truckers' yards

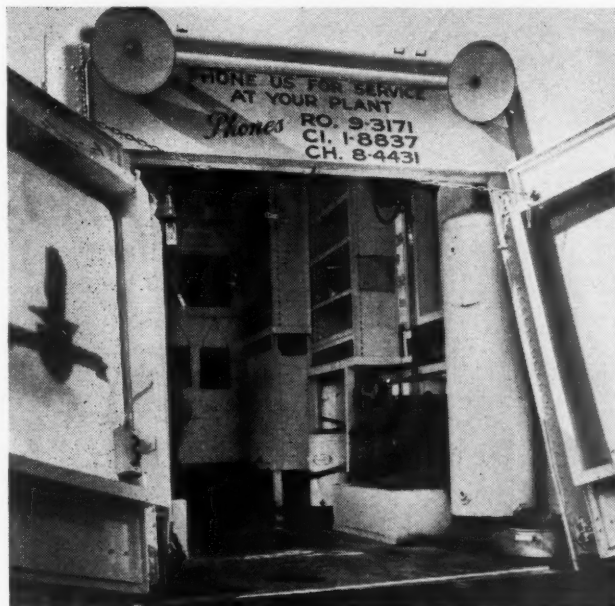
by W. B. Brown



Snyder-Lynch's mobile lubrication unit opens panel doors at the side to allow truck service-man to handle all of his lubricants and equipment from the outside.

Snyder-Lynch Carries the Shop to the Customer

The inside view of the truck shows arrangement of tool shelves, air-compressor, oil tank. The unit carries its own battery charger, 30 gallon water tank, and waste oil drum.

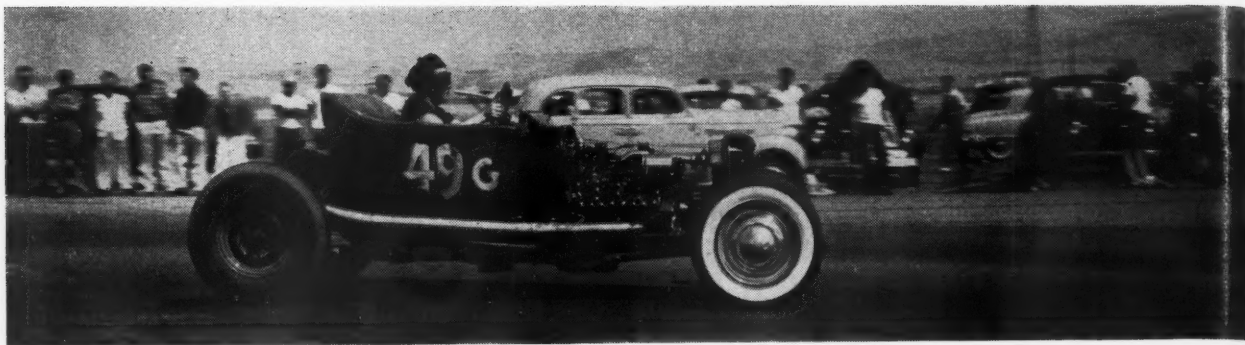


THE fleet operator's available time for truck servicing . . . his distance away from the service center . . . the lack of sufficient lube and repair room when his trucks did get there . . . were all pressing, but not insoluble headaches to Jack Snyder, president of Snyder-Lynch Ford Motors in Burbank, Calif.

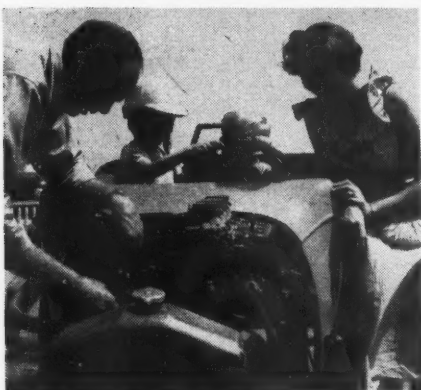
He scratched his head and came up with the idea shown here: A mobile lubrication unit that can be sent out to do steady lubrication and minor repair work right in the trucker's own yard.

The yellow and blue, Snyder-Lynch lubrication truck is set up as a self-contained unit for regularly scheduled maintenance. Inside, it is equipped with its own air compressor, battery charger, repair tools. Three containers are on each side of the truck behind plexiglas, panel doors to handle the chassis lubricants.

(Continued on page 120)



Even the fair sex enjoys zooming down the straight-away at better than a mile-a-minute clip for hot-rod honors.



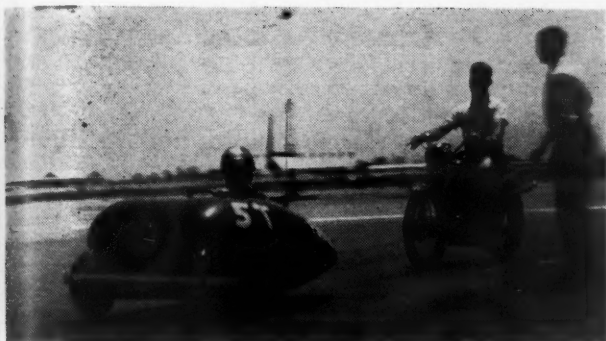
The youngsters check the steering and mama kibitzes while dad checks the tappets.

Everything Goes a

From teen-agers to grandmas, they spend an after

All makes and models are seen at the track, including fast foreign sports cars.





Even Junior, with a low-swung midget creation gets into the act at the converted Santa Ana air strip.



Top. Stock cars outnumber hot rods three to one, which indicates the interest displayed in the track by average motorists.

Above. A "buckboard" or a truck, they're all anxious to see how the "bucket" performs after the latest improvements have been made.

at Santa Ana

afternoon of fun burning up the track

EVERY Sunday, hundreds of motoring enthusiasts gather at an old air strip on the outskirts of Santa Ana, California. For an entrance fee of one dollar they can race their cars in safety all afternoon. Stock cars, sport cars, foreign makes, Cadillacs and Fords, hot rods and motorcycles, all take part.

This is strictly a community affair. It took many months of concerted effort on the part of townspeople and law enforcement officials to map out a program that was safe, yet provide competitive events for the thrill-seekers.

The track is about a quarter-mile long and at the far end are placed two electric timers. From a standing start, each contestant picks up speed as fast as possible and the timers record the official time taken to cover the course. After an entrant has paid his fee he can run his car through as many times as he cares to.

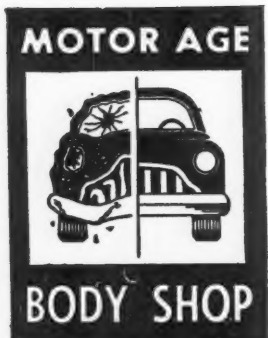
Teen-agers and many women are numbered

among the drivers who want to find out how fast the old family car will go. There are more than a few women driving the hot rods whose times are right up there with the men's.

Top speeds at the track are 135 mph for motorcycles, 122 mph for hot rods, and 75 mph for stock cars. Cars are divided into three classes and trophies presented to the best in a class for the day. Stock cars outnumber hot rods three to one.

Popularity of the track is evidenced by 3,500 paid admissions to watch the races. Over 220 cars have raced at the track in one afternoon.

The Orange County sheriff's department credits the track with practically eliminating speeding violations among the townspeople. No serious accidents have occurred at the track since C. J. Hart and Frank Stillwell have been running it. All consider the track a swell place to settle the old argument among car owners, whose is faster than whose.



Profits increase when old newspapers are abandoned in favor

of r

Make More Money with Modern Masking



Handy rolls of masking paper of the right width make it easy to mask a wheel for painting, as shown here. This would be difficult with newspapers.

The masking machine dispenses the right width of paper, already taped, so that door edges and jambs can be masked quickly.



of modern masking materials and equipment



Masking machines can be obtained as wall (or bench) mounted units, shown above, or as portable units, shown below. Painters claim that the variety of widths and lengths of paper and tape at their fingertips with these devices makes them a valuable piece of shop equipment.



by Arthur H. Nellen, Jr., Managing Editor

BODY work and refinishing, already a profitable field, can be made even more profitable by taking advantage of economizing practices which cut down on material or labor costs. In this line of work, the latter is especially important since labor constitutes such a large portion of a customer's bill.

One good way to reduce labor costs is through the modern methods of masking—that is, with the use of the machines and material which will save time for the painter and help him to do a better job. These masking machines are by no means new, but in recent years they have been refined and made more practical. Their possibilities have been overlooked by many shops who are still using newspapers for masking.

We don't mean to say that newspapers won't work—they have been used for many years in masking, but it's false economy. The cost of the proper materials is negligible compared to the cost of labor to struggle with newspaper. Here is why.

With a masking machine, an apron of kraft paper is reeled off to the proper length and the tape applied evenly to the edge as it is pulled off. It's simple, just four operations:

1. Grasp the apron.
2. Pull it forward.
3. Tear it off.
4. Place it on the car.

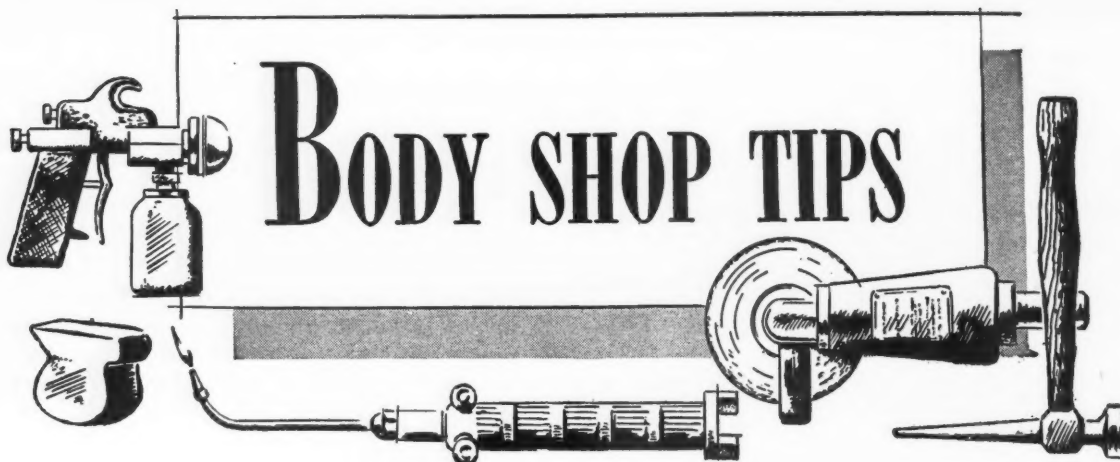
Using the "Daily News" involves over twice as many operations.

1. Pick up the newspaper from the bench.
2. Unfold it.
3. Rip it lengthwise.
4. Lay it on the fender or hood.
5. Pick up a roll of masking tape.
6. Unwind the tape.
7. Place the tape on the edge of the newspaper.
8. Lift the taped newspaper off the fender or hood.
9. Place it on the car.

Newspaper is flimsy, and when enough thickness is used to avoid bleeding, it becomes clumsy. Kraft paper is firm enough to be handled easily, and comes in convenient lengths and widths. It actually requires less tape, since there are less gaps to seal up and it stays in place better. Also, there is less chance of "bleeding." Because of the uniform edge of tape which is applied, applying the paper along a straight line is easier. In the time it takes to pick up and unfold a piece of newspaper, an apron of masking paper can be reeled off, taped, and applied to the car.

There are other disadvantages to the newspaper method which might be taken as a "matter of course" by shops who use it, but which are still factors that slow up the job. Anyone who has ever used old newspapers for masking,

(Continued on page 140)



BODY SHOP TIPS

**BODY SHOP TIPS
are worth**

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Use Heat to Repair Bent Door Handle

On cars with the turn type door handle, the handles sometimes sag down after years of use. A quick and easy way to remedy this is by simply taking off the handle and heating the shaft that goes into the latch. By having it clamped in a vise, turn the handle opposite the way it is used to open the door, just enough to bring it back to its usual position when reinstalled. This saves replacing the latch or handle. *Richard Batla, Schroeder Motors, 902 Victoria Street, Taylor, Texas.*

Air Hammer In Vise Helps In Straightening Chrome

I have straightened a lot of chrome by clamping my air hammer in a vise and handling the chrome with both hands. I have made several heads out of copper so as not to hurt the chrome strips. It works well on grille parts and

moldings, saves a lot of time and in many cases this is the only way that chrome can be straightened. *Harold Meints, Odell Body Shop, Odell, Neb.*

Cotton Swab Used For Touching Up Spots

In touching up scratches, nicks, chipped or thin spots on edges of doors, deck lids, fenders and rusty seams, I have found that a cotton swab, of the kind used in servicing babies, does a wonderful job. It is also useful for spreading cement on rubber weather strip molding before installation on doors and deck lid channels. *Duke E. Story, Story Body and Paint Shop, 3604 First Street, Grove City, Ohio.*

Masking Tape Covers Weld On Repaired Hood, Trunk

Many times, when repairing a hood or trunk lid, it is necessary to cut out pieces or panels from the inside of the lid or hood. After the job is finished and the pieces of metal are welded back in, take masking tape and run it where you have cut the pieces out. Then when you paint the job, spray a little on the tape, etc. This covers up the welds, and also makes the job look a good bit better, especially when the customer lifts his hood or opens his trunk lid. *Don Carbonneau, Box 484, Newport, Vermont.*

Spraying Door Jambs with Lacquer Speeds Enamel Job

To get a paint job on a car or truck out sooner, order one pint of

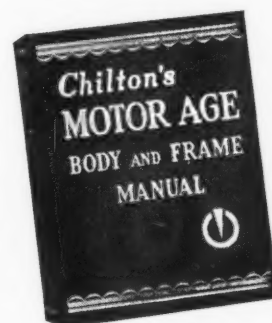
paint of the color desired in lacquer and balance of the paint in enamel.

Spray the door jambs and trunk lid at once in lacquer, then mask and clean the car. You can shut the doors and trunk and spray the enamel and the door will not be stuck shut. *Carl A. Buurma, 292 West 18th St., Holland, Mich.*

Open Ford Locked Hood By Cutting Under Emblem

I have found on late model Fords that the hood release wire sometimes breaks and it is impossible to open the hood. This is what we do:

Remove the plastic hood emblem which is held on by speed nuts. It can be pried off with a screwdriver. Take a $\frac{7}{8}$ inch hole saw and cut a hole in the hood in the center where the emblem fits. Take a screwdriver and release the hood. Repair the hood wire and re-install the hood emblem. *Phillip Devereaux, 230 Buffalo St., Freeport, Pennsylvania.*



Other valuable information of the type presented each month in The BODY SHOP is available in Chilton's Motor Age Body and Frame Manual.

Chilton's MOTOR AGE, SEPTEMBER, 1953

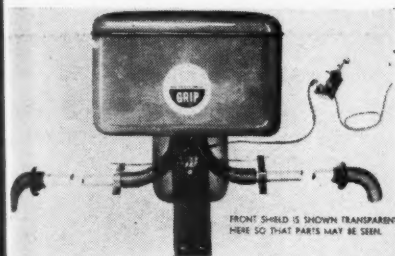
New

PRODUCTS SHOW WINDOW

FOR FURTHER INFORMATION USE POSTCARD FACING NEXT PAGE

392. Road Sander

Hecker Products Corporation: The Skid Grip Automatic Road Sander has a two speed electric motor controlled by a dashboard switch. A motorized feed spreads



grit the full tire width. A six-quart steel tank is mounted in the rear of the trunk compartment. Two aluminum tubes with rubber spouts lead to the position above the tires. At a touch of the switch the 6 or 12 volt motor vibrates the tank and tubes and forces the grit flow to both tires simultaneously.

393. Plug Protector

United Motors Service: A new Packard Electric spark plug protector to prevent loss of voltage due to moisture and designed for installation on either straight or right-angle terminals, is being merchandised by the above company. The new plug protector is made of fire-proof neoprene compound in a ribbed construction which permits bending to fit over angle terminals and still make a tight seal at both the cable and plug ends.

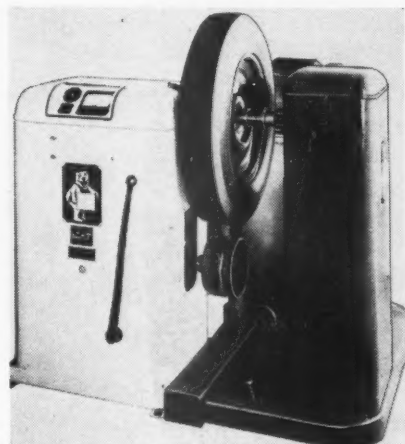
394. Valve Refacer

K. O. Lee Company: The model K-500 wet valve replacer features tables which are adjusted for V-

ways, with automatic take-up for wear. It grinds wet or dry and is equipped with a five inch grinding wheel. The valve face angle ranges from 0 to 90 degrees with positive stop feature and minus 1 degree setting. One valve feeds the coolant to either grinding wheel. A one gallon tank, with baffle plates to clean coolant and grinding oil, can be removed from the left side of the machine. Standard equipment includes a diamond dresser, micrometer butt grinding attachment assembly for grinding valve stems, tappets and rocker arms. Valve stem capacity is 9/32 in. with standard collet and can be increased with extra equipment collets.

395. Tire Truer

Bear Manufacturing Company: A precision truing and balancing machine, known as the Balantru, is designed to eliminate the high spots on tires, plus balance them, all in one operation. This machine

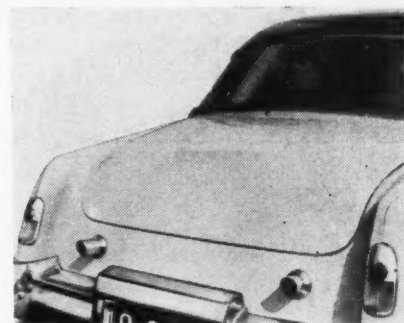


permits the operator to mount the wheel and drum, or wheel alone,

and then true the tire and balance the wheel assembly without having to dismount the unit. The manufacturer points out that an eccentric tire will never become perfectly round from wear, but actually becomes more eccentric as the high spot continues to pound the pavement. By truing the tire first, and then balancing, the tire will last longer and give a better ride.

396. Back-up Lamps

Sparton Automotive: Twin Jet Back-Up Lamps are housed in simulated dual exhaust pipes. The



twin pipes attach to the rear deck of any car and are finished in chrome. They give the custom appearance and still serve the functional use of lights. These Back-Up Lamps are packed in a colorful carton which has been designed to double as an attractive counter display.

397. Primer-Surfacers

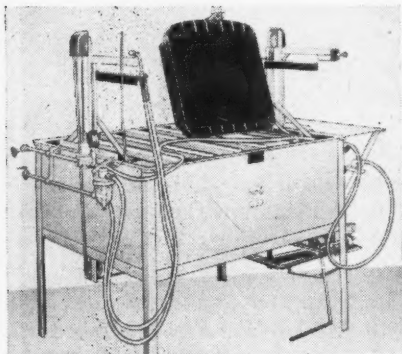
E. I. du Pont de Nemours and Company: The latest du Pont development in the refinishing field is a primer-surfacer that is said to take sixteen times longer to settle after thinning than previous material. This is said to reduce

New Products Continued from Page 67

the cause of "pinholing" and virtually eliminates the need for constant agitation in the spray cup.

398. Radiator Bench

Inland Manufacturing Company: An improved type of combination test and repair bench,



known as a Model J-60 Test and Repair Bench, is claimed to cut labor time by 50%. It features an electric elevator which lowers the radiator into the tank, to save lifting heavy radiators up and down during the testing operation. Construction of the bench is 10 gage steel with all seams welded inside and out. The unit is 70 inches long by 38½ inches wide. Accessories include an air blow gun and manifold, soldering torch and manifold, air-pressure regulator and gage, air filter, and pilot light.

399. Skylight

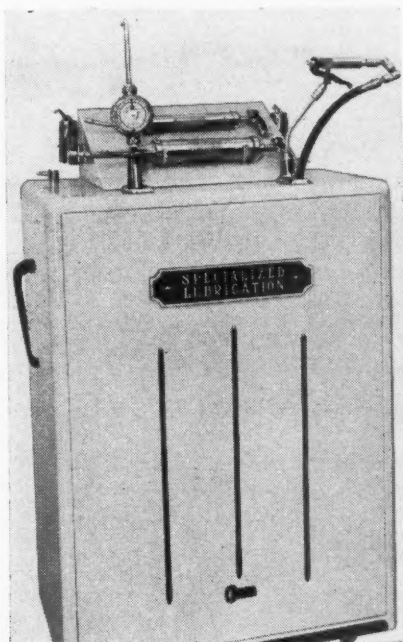
Wasco Flashing Company: For better natural, diffused light through showrooms and shop ceilings, this company has developed the Wascolite Skydomes, a prefabricated, clear, colorless, translucent acrylic dome which is used in place of the old fashioned skylight. The skydomes are claimed to be glare-proof and virtually



maintenance-free. They are designed to withstand extreme temperature ranges and to reflect heat. The domes actually float in leakproof, flash-welded aluminum frames that allow for expansion or contraction.

400. Lube Cabinet

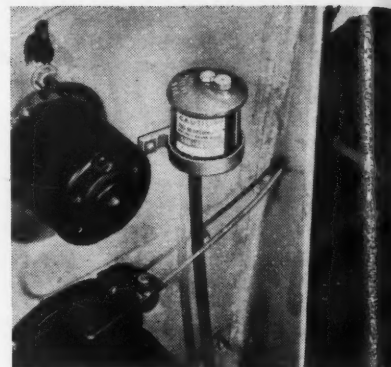
Grover Smith Manufacturing Corporation: The newest addition to the Grover line of lubrication equipment is this two-pump, portable cabinet, which is a complete, portable lube department within itself. Extra long extension hoses are said to reach easily to every lubrication point without removing the cabinet from its position beside the lift. Hand guns, oilers, wiping rags and tools are within close reach. The white baked



enamel, chrome trimmed cabinet has room for one-quarter drum of chassis lubricant and a one-quarter drum of 90 weight gear oil. In addition to the two air operated pumps with hoses, meter and control valves, the unit includes a utility gun and a suction-flush gun. A water pump gun can also be supplied.

401. Fluid Dispenser

M & H Products: The See-Level indicator and dispenser shows the level of brake fluid at all times and



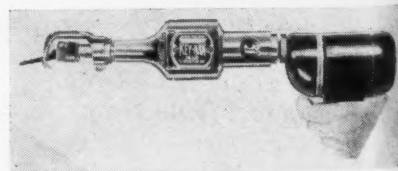
serves as an auxiliary master cylinder. Brake fluid goes into the visible container under the hood of the car. The fluid supply is checked every time the hood of the car is raised. Three numbers are said to provide complete coverage.

402. Radiator Hose

H. B. Egan Manufacturing Company: Camel Flexile Radiator Hose for all straight and curved upper and lower hose coverage for passenger cars built since 1936 has been announced. Antifreeze solutions or radiator chemicals are said not to damage the hose with the "resistant lining." The wire spiral construction is claimed to permit coolants to flow freely regardless of hose position or shape.

403. Portable Power Saw

Producers and Distributors, Inc.: Key-Hak attachment fits any heavy duty ¼ inch electric or air drill or motor driven flexible shaft. This portable power saw, which has 360 degrees rotability, is used most successfully with drills with chuck speeds of 2000 to 3000 rpm. The Key-Hak is designed to cut directly without the aid of a starting hole, into 20 gage or lighter sheet metal as well as into wood



of any thickness. Special saw blades are available for cutting stainless steel, monel, chromoloy and chrome vanadium, as well as into bronze, copper, aluminum, zinc and lead.

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404. Cable Tools

AC Spark Plug Division: Two new tools which simplify and save time for mechanics in making up and assembling speedometer cables and casings from bulk stock have recently been made available. The tools make it possible to make up cables and casings, regardless of length or terminal connections, in the field. One of the tools is known as a "Cable Staking Tool," constructed with cutoffs for both .130 and .150 inch diameter cables. Provision is also made to square cable ends and assemble collars and fillings. The other is called

the "Casing Swaging Tool," which has a provision for swaging ferules to .260, .316, and .437 inch diameter casings.

405. Paint Strainer

Clear-Flo Strainer Company: A fine gage brass screen strainer for paint spray guns, is designed to eliminate slugs, clogging and spitting. It slides over the intake tube of the spray gun, permitting only strained finishing material to reach the nozzle. There are four different sizes of the Clear-Flo Strainers to fit various makes of spray guns. It is self cleaning,

cleaned simultaneously with the spray gun after the job is completed.

406. Spark Plug

Hastings Mfg. Company: An exclusive plug set for Chevrolet cars and light trucks has been announced by Hastings. It is specifically designed for Chevrolet engines with some mileage, having a special gap setting for good idling and no adjustment is needed at the time of installation. It has a special heat range for extra resistance to fouling, yet is said to provide excellent high speed per

Postcard valid for 90 days only. Information may be obtained subsequently by letter, fully describing the item in question.

More Info

on new products in this issue which are of special interest to you can be obtained by using the free post card at the right. Fill in your name, address and other information and circle the numbers of the new products which interest you. Tear out the card and drop it in the mail.

Here's How

you can pass your thoughts on Motor Age to its editors. Just write down the titles of the features you like best in this issue in the order of your preference. Then, in the next spaces, write in your ideas on making Motor Age more useful to you.

Frank P. Tighe, EDITOR MOTOR AGE
P. O. Box 76, Village Station, N. Y. 14, N. Y.

9/53

Please send me further information on the New Products, the code numbers of which I have circled below.

- | | | |
|-------------------------|------------------------|------------------------|
| 392. Road Sander | 409. Body Tool Kit | 426. Alignment Gauge |
| 393. Plug Protector | 410. Glazing Putty | 427. Headlight Dimmers |
| 394. Valve Refacer | 411. Exhaust Headers | 428. Combination Gauge |
| 395. Tire Truer | 412. Spark Plug | 429. Cigarette Lighter |
| 396. Back-up Lamps | 413. Hand Torch | 430. Tinning Compound |
| 397. Primer-Surfacer | 414. Sander-Polisher | 431. Cable Display |
| 398. Radiator Bench | 415. Oil Additive | 432. Brake Fluid |
| 399. Skylight | 416. Steering Adjuster | 433. Plastic Visor |
| 400. Lube Cabinet | 417. Body Equipment | 434. Filter Sheet |
| 401. Fluid Dispenser | 418. Oil King | 435. Shop Press |
| 402. Radiator Hose | 419. Tire Conditioner | 436. Power Tools |
| 403. Portable Power Saw | 420. Squeal Stopper | 437. Torque Wrenches |
| 404. Cable Tools | 421. Tire Sealer | 438. Dual Exhaust |
| 405. Paint Strainer | 422. Lifter Tool | 439. Three-Way Tester |
| 406. Spark Plug Set | 423. Stud Wrench | 440. Baking Oven |
| 407. Merchandiser | 424. Detergent | 441. Ratchet Wrench |
| 408. Gear Pullers | 425. Shop Horse | |

Your Name Your Title

Your Company

Jobber Independent Dealer

Address (Street & No.) (City) (Zone) (State)

Frank P. Tighe, EDITOR MOTOR AGE
Chestnut & 56th Sts., Philadelphia 39, Pa.

9/53

We liked the following features in this issue of Motor Age:

1. _____
2. _____
3. _____

Here's how Motor Age can be more helpful to us:

Your Name Your Title

Your Company

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New Products Continued from Page 53

formance. The plugs are offered in a special package of six. The electrodes in this plug are out of the path of the hot flame sweep. There are two ground electrodes set to the side for easier cleaning.

407. Merchandiser

Ideal Corporation: A combination stock organizer and display, referred to as "Stockit," keeps Ideal's worm-drive hose clamp (Snaplock) stocked by size and on the counter

for convenience and visibility. It features permanent steel construction and clear plastic stock bins to reveal shortages at a glance.

408. Gear Pullers

J. H. Williams & Company: A new line containing a complete system of gear and wheel pullers is available from this firm. Jaws and blocks are forged from selected steel and are heat treated. Jaw clips are self-adjusting. Forcing

screws are made of heat treated alloy steel. A new "unified" thread on the screws and blocks is another feature. Two and three jaw styles in many sizes are available with changeable jaws to extend the range of their use and capacity.

409. Body Tool Kit

The Salsbury Corporation: A new body and sheet metal shop tool kit featuring a light weight, heavy-duty air hammer has been announced. The air hammer requires 9 cu. ft. per minute of air, said to be approximately 40 per cent less than normal, yet is claimed to deliver harder and more blows per minute. Included in the kit is a metal smoothing tool, a panel cutter, an underseal scraper and a chisel for bolt and rivet cutting.

410. Glazing Putty

The Arco Company: Available in gray or oxide red, a new glazing putty features unusual easy sanding plus excellent adhesion and flexibility whether used on bare metal or on previously coated surfaces. The company describes the putty as easy spreading, "like warm oleomargarine" which allows it to be smoothed over deep disc marks and eliminates the need for extensive metal preparation. The putty will not cake on the knife or squeegee while being worked and gives a smooth surface, according to the firm's report. It is packaged in an easy-access, wide mouthed container holding four pounds, in one pound tubes or gallons.

411. Exhaust Headers

Standard Automotive Mfg. Company: Fenton Cast Iron Exhaust Header Systems are now available for Ford V-8 and Mercury, all Oldsmobile V-8 models and Ford 6 with overhead valves, as well as the previously available models for Chevrolet, Dodge and Plymouth. They are said to be perfectly machined castings requiring no alterations of any kind so that installation is easy and that the set-up is free of grease and rattles.

(Continued on page 78)

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Current Passenger Car Price, Weight and Body Table

**Following are prices at factory for cars with standard equipment as of August 27, 1953
State or local taxes, transportation and finance charges and optional equipment are extra.**

BODY MAKE AND MODEL					BODY MAKE AND MODEL					BODY MAKE AND MODEL					BODY MAKE AND MODEL				
	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight		List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight		List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight		List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK					DE SOTO†					KAISER					PACKARD (Continued)				
Special 40 Sedan, DeL., 2d	2010	189	2199	3675	Powermaster 6 Club Coupe	2166	168	2334	3480	Manhattan Club Sedan	2395	202	2597	3235	Cpe. Conv. Sed. Patric.	3200	286	3486	4125
Sedan, DeL., 4d	2064	191	2255	3710	Sedan, 4d, 6p	2186	170	2358	3535	Sedan, 4d	2444	206	2650	3265	Cpe. Carib.	4804	406	5210	4265
Riviera Cpe., 2d	2102	193	2295	3705	Sportsman Stat. Wagon	2417	187	2604	3585	Traveler, 4d	2542	213	2755		Sed. Derham	6037	494	6531	4335
Conv. Cpe., 2d	2343	210	2553	3815	Sedan, 4d, 8p	2857	221	3078	3845	DeLuxe Club Sedan	2267	192	2459	3150	Sed. Exec. Lim. Corp.	6381	519	6900	4650
Super 50 Rivra. Cpe., 2d.	2387	224	2611	3845	Firedome 8 Club Coupe	3018	233	3251	4080	Sedan, 4d	2267	192	2459	3150					4720
Rivra. Sed., 4d.	2466	230	2696	3905	Sedan, 4d, 6p	2433	188	2821	3655	Traveler	2317	196	2513	3200	PLYMOUTH†				
Conv. Cpe., 2d	2751	251	3002	4035	Sportsman Club Coupe	2453	190	2843	3720	Dragon Hardtop	2315	204	2619		Cambridge Coupe, 3p	1480	117	1597	2888
Est. Wagon, 4d	3149	281	3430	4150	Stat. Wagon	2685	207	2892	3740	Sedan, 4d	3628	296	3924	3320	Suburban Club Sedan	1895	149	2044	3129
R'dmaster 70 Rivra. Sed., 4d.	2971	283	3254	4100	Stat. Wagon	2891	223	3114	3990	Lincoln Cosmopolitan Sedan, 4d					Sedan, 4d	1582	125	1707	2943
Rivra. Cpe., 2d.	3068	298	3358	4250	Sedan, 8p	3111	240	3351	3995	Sport Coupe	3226			4135		1617	128	1745	2983
Conv. Cpe., 2d	3205	301	3506	4250	DODGE†	3276	253	3529	4270	Capri Sedan, 4d	3226			4135	Cranebrook Club Coupe	1689	133	1822	2971
Est. Wagon, 4d	3694	337	4031	4315	Mdowbrk. Spec. Club Coupe	1816	142	1958	3100	Convertible	3322			4155	Sedan, 4d	1717	135	1852	3023
Skyline Spt., 2d	4596	404	5000	4315	Sedan, 4d	1855	145	2000	3196	Sedan, 4d	3453			4150	Belvedere Conv. Coupe	1895	149	2044	3027
					Meadowbrk. Club Coupe	1927	150	2077	3065	Capri Sedan, 4d	3540			4185	Sed. Convoy	2040	160	2200	3193
					Sedan, 4d	1954	152	2106	3175	Hardtop	3699			4310		2028	159	2187	3170
					Suburban	2019	157	2176	3190	Mercury Custom Sedan, 2d					PONTIAC				
					Coronet 6 Club Coupe	1933	151	2084	3155	Sedan, 2d	2004			3405	Chieftain 8 Sedan, 2d	1788	168	1956	3341
					Sedan	1958	153	2111	3220	Sedan, 4d	2057			3450	Sedan, 4d	1843	172	2015	3381
					Coronet 8 Club Coupe	2039	159	2198	3325	Sport Coupe	2117			3465	DeL. Sed., 2d	1885	175	2060	3356
					Sedan, 4d	2059	160	2219	3385	Monteary Sedan, 4d	2133			3425	DeL. Sed., 4d	1940	179	2119	3396
					Diplomat Conv. Coupe	2190	170	2360	3310	Coupe	2244			3465	DeL. Catalina	2112	192	2304	3421
					Sierra	2314	180	2494	3480	Convertible	2390			3585	Cust. Catalina	2174	196	2370	3421
						2322	180	2502	3425	Station Wagon	2591			3765	DeL. Conv. Cpe.	2242	202	2444	3571
					FORD					NASH					St. Wg., 2 St. Pt.				
					Mainline 6 Bus. Coupe	1400	122	1522	2977	Rambler Super Suburban	1841	162	2003	2555	St. Wg., 3 St. Pt.	2299	206	2505	3666
					Tudor	1497	130	1627	3057	Custom Stat. Wagon	1951			2119	St. Wg., 2 St. Gr.	2322	208	2530	3688
					Fordor	1542	133	1675	3105	Country Club Conv. Sedan	1955			2125	St. Wg., 3 St. Gr.	2373	212	2585	3666
					Ranch Wagon	1846	158	2004	3294	States'n Sup. Sedan, 2d	1986	178	2144	3025	Dix. St. Wg., Pt.	2378	212	2590	3626
					Customline 6 Tudor	1582	137	1719	3067	Sedan, 4d	2000	178	2178	3045	Dix. St. Wg., Gr.	2452	218	2670	3626
					Club Coupe	1591	137	1728	3046	States'n Cust. Sedan, 2d	2121	188	2309	3050	Chieftain 8 Sedan, 2d	1858	173	2031	3421
					Fordor	1628	140	1768	3115	Sedan, 4d	2144	188	2332	3070	Sedan, 4d	1913	177	2090	3456
					Mainline 8 Bus. Coupe	1471	128	1599	3058	C.C. Sedan, 2d	2237	196	2433	3095	DeL. Sed., 2d	1955	181	2136	3438
					Tudor	1567	135	1702	3128	Amb. Super Sedan, 2d	2314	207	2521	3410	DeL. Sed., 4d	2010	184	2194	3471
					Fordor	1613	138	1751	3171	Sedan, 4d	2350	207	2557	3430	DeL. Catalina	2162	198	2380	3496
					Ranch Wagon	1917	163	2080	3406	Amb. Cust. Sedan, 4d	2477	218	2695	3450	Cust. Catalina	2244	202	2446	3496
					Customline 8 Club Coupe	1662	142	1804	3121	Sedan, 4d	2498	218	2716	3480	DeL. Conv. Cpe.	2312	206	2518	3626
					Tudor	1653	141	1794	3133	C.G. Sedan, 2d	2602	227	2829	3550	St. Wg., 2 St. Pt.	2318	207	2525	3688
					Fordor	1698	145	1843	3193	OLDSMOBILE					St. Wg., 3 St. Pt.	2369	211	2580	3756
					Country Sed.	2078	176	2252	3539	DeLuxe 88 Sedan, 2d	2066	196	2262	3603	St. Wg., 2 St. Gr.	2392	213	2605	3686
					Crestline 8 Victoria	1941	164	2105	3250	Sedan, 4d	2126	201	2327	3642	St. Wg., 3 St. Gr.	2443	217	2660	3756
					Sunliner	2043	172	2215	3334	Super 88 Sedan, 2d	2189	206	2395	3628	Dix. St. Wg., Pt.	2448	216	2664	3718
					Country Sq.	2203	185	2388	3609	Sedan, 4d	2252	210	2462	3673	Dix. St. Wg., Gr.	2522	222	2744	3718
					HENRY J Corsair Sedan, 2d	1286	113	1399	2395	Holiday Conv. Coupe	2448	225	2673	3661	Studebaker Champion Custom Sedan, 2d	1585	150	1735	2690
					DeL. Sed., 2d	1437	124	1561	2445					Sedan, 4d	1615	152	1767	2710	
					HUDSON Jet Sedan, 4d	1685	173	1858	2650					DeLuxe Sedan, 2d	1675	156	1831	2700	
					Super Jet Sedan, 4d	1775	179	1954	2700					Sedan, 4d	1705	158	1863	2735	
					Wasp Sedan, 2d	2063	201	2264	3350					Coupe, 5p	1710	156	1868		
					Club Coupe	2106	205	2311	3380					Regal Sedan, 2d	1755	162	1917	2715	
					Super Wasp Club Coupe	2203	210	2413	3460					Sedan, 4d	1785	164	1949	2745	
					Sedan, 2d	2252	214	2466	3480					Coupe, 5p	1790	165	1955	2700	
					Sedan, 4d	2252	214	2466	3480					Convertible	1940	176	2116	2760	
					Hollywood Conv. Brghm.	2573	239	2812	3525					Commander DeLuxe Sedan, 2d	1910	179	2089	3055	
					Hornet Club Coupe	2505	237	2742	3530					Sedan, 4d	1940	181	2121	3075	
					Sedan, 4d	2529	240	2769	3570					Coupe, 5p	1945	182	2127		
					Hollywood Conv. Brghm.	2833	262	3095	3610					Regal Sedan, 4d	2020	188	2208	3095	
						3061	281	3342	3780					Coupe, 5p	2025	188	2213	3040	
														Land Cruiser	2120	196	2316	3180	
														Convertible	2175	199	2374	3120	
														WILLYS Aero Lark, 2d	1500	146	1646	2487	
														Aero Lark, 4d	1580	152	1732	2507	
														Aero Falcon, 2d	1640	156	1796	2507	
														Aero Falcon, 4d	1700	161	1861	2529	
														Aero Ace, 2d	1800	183	1963	2585	
														Aero Ace, 4d	1870	188	2038	2588	
														Aero Hardtop	1980	182	2162	2757	
														Sta. Wagon, 4 cyl.	1705	157	1862	2818	
														Sta. Wagon, 6 cyl.	1796	163	1949	2818	

† Prices do not include delivery and handling charges.

Current Engine and Tune-up Specifications

MAKE AND MODEL	ENGINE				TUNE-UP DATA										STEERING											
	Wheelbase (In.)	No. of Cylinders, Bore and Stroke	Taxable H.P.	Piston Displacement (Cu. In.)	Maximum Brake H.P. (at Specified R.P.M.) (with Bare Engine)	Compression Ratio	Spark Plug Make and Type	Rings		VALVES				IGNITION				Caster (Deg.)	Camber (Deg.)	Toe-In (In.)	King Pin Inclination at Camber (Degrees)					
								No. and Width	Compression	No. and Width	Seat Angle	Inlet	Exhaust	Operating Tappet Clearance	Inlet Valve Timing	Deg. Inlet or After T.C.	Timing Marks Located					Breaker Point Gap	Cam Angle (Deg.)	Spark Plug Gap	Spark Occurs	Timing Marks Located
Buick.....	8, 40	8-3 1/2 x 4 1/2	32.51	263.3	125-3600	7.0	AC-46X	2-1 1/2	2-1 1/2	45	.015H	.015H	.004(b)	138(c)	No	.015	(d)	.026	4B	Fly	5 1/2	12(e)	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
	8, 60	8-3 1/2 x 4 1/2	51.2	322.0	164-4000	8.0	AC-44-5	2-1 1/2	2-1 1/2	45	.015H	.015H	.004(b)	138(b)	No	.015	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
Cadillac.....	8, 62	8-3 1/2 x 4 1/2	48.50	331.0	188-4000	8.5	AC-46-5	2-1 1/2	2-1 1/2	44	.015H	.015H	.004(b)	138(b)	No	.015	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
	8, 60	8-3 1/2 x 4 1/2	48.50	331.0	210-4150	8.3	AC-46-5	2-1 1/2	2-1 1/2	44	.015H	.015H	.004(b)	138(b)	No	.015	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
Chevrolet.....	8, 1500	8-3 1/2 x 4 1/2	30.40	235.5	108-3600	7.1	AC-44-5	2-1 1/2	2-1 1/2	44	.013H	.013H	.004(b)	138(b)	No	.013	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
	6, 2100, 2400*	8-3 1/2 x 4 1/2	30.40	235.5	108-3600	7.1	AC-44-5	2-1 1/2	2-1 1/2	44	.013H	.013H	.004(b)	138(b)	No	.013	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
Chrysler.....	8, 115	8-3 1/2 x 4 1/2	28.36	204.1	119-3600	7.5	AC-44-5	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	138(b)	No	.010	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
	6, C-60	8-3 1/2 x 4 1/2	28.36	204.1	119-3600	7.5	AC-44-5	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	138(b)	No	.010	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
	V6, C66, C58, C68	8-3 1/2 x 4 1/2	46.51	331.1	160-4000	7.5	AL-4S140	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	138(b)	No	.010	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
De Soto.....	8, S-18	8-3 1/2 x 4 1/2	28.36	204.1	119-3600	7.1	AL-A18	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	138(b)	No	.010	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
	6, S-16	8-3 1/2 x 4 1/2	42.05	276.1	160-4000	7.0	AL-4S140	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	138(b)	No	.010	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
Dodge.....	6, D-46, D-47	8-3 1/2 x 4 1/2	25.35	230.2	103-3600	7.0	AL-A18	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	138(b)	No	.010	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
	V6, D-44, D-48	8-3 1/2 x 4 1/2	37.80	241.3	140-4000	7.1	AL-4S140	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	138(b)	No	.010	(d)	.033	5B	Fly	6	18	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/4
Ford.....	6	6-3 5/8 x 3.60	30.40	215.3	101-3500	7.0	CH-H-10	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	138	VD	.025	37	.036	TC	VD	4	15	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	5
	V8	6-3 1/2 x 3 1/2	32.50	239.4	110-3600	7.2	CH-H-10	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	138	VD	.025	37	.036	TC	VD	4	15	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	5
Henry J.....	4, 533	4-3 1/2 x 4 1/2	15.63	134.2	68-4000	7.0	AL-A7	2-1 1/2	2-1 1/2	45	.016C	.016C	.020	9B	FP	.015	27	.031	2B	FP	4	22	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4-4 1/4
	6, 5310	6-3 1/2 x 4 1/2	23.40	161.0	80-3600	7.0	AL-A7	2-1 1/2	2-1 1/2	45	.016C	.016C	.020	9B	FP	.015	27	.031	2B	FP	4	22	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4-4 1/4
Hudson.....	6, 1C, 2C	6-3 1/2 x 4 1/2	21.60	202.0	104-4000	7.5	CH-H10	2-1 1/2	2-1 1/2	45	.012	.010	.010	26.9B	VD	.020	34	.030	TC	VD	5	19 1/2	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4-4 1/4
	6, 4C	6-3 1/2 x 4 1/2	30.45	232.0	112-4000	6.7	CH-H-8	2-1 1/2	2-1 1/2	45	.010	.010	.010	26.7B	VD	.020	34	.030	TC	VD	5	19 1/2	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	3-3 3/8
	6, 5C	6-3 1/2 x 4 1/2	30.45	232.0	112-4000	6.7	CH-H-8	2-1 1/2	2-1 1/2	45	.010	.010	.010	26.7B	VD	.020	34	.030	TC	VD	5	19 1/2	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	3-3 3/8
	6, 7C	6-3 1/2 x 4 1/2	34.66	306.0	145-3600	7.2	CH-H-11	2-1 1/2	2-1 1/2	45	.010H	.010H	.010H	26.7B	VD	.020	34	.030	TC	VD	7	18 1/2	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	3-3 3/8
Kaiser.....	6, 531, 532	6-3 1/2 x 4 1/2	26.30	226.2	118-3600	7.3	AL-A-7	2-1 1/2	2-1 1/2	45	.014C	.014C	.018	10B	VD	.022	34	.030	4B	VD	5	12 1/2	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/2
	V6	6-3 1/2 x 4 1/2	46.20	317.5	205-4200	8.0	CH-H-10	2-1 1/2	2-1 1/2	45	.014C	.014C	.018	10B	VD	.022	34	.030	4B	VD	5	12 1/2	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/2
Lincoln.....	8, 123	8-3 1/2 x 4 1/2	32.50	265.4	125-3600	7.2	CH-H-10	2-1 1/2	2-1 1/2	45	.014C	.014C	.018	10B	VD	.022	34	.030	4B	VD	5	12 1/2	1N to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	4 1/2
Mercury.....	6, 5310	6-3 1/2 x 4 1/2	23.44	184.0	85-3600	7.3	AL-A7-A	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	10B	DC	.022	34	.030	4B	VD	4	12 (k)	1/2P to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	8
Nash.....	6, 5310	6-3 1/2 x 4 1/2	23.44	184.0	85-3600	7.3	AL-A7-A	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	10B	DC	.022	34	.030	4B	VD	4	12 (k)	1/2P to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	8
	6, 5340	6-3 1/2 x 4 1/2	23.44	185.6	90-3800	7.5	AL-A7-A	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	10B	DC	.022	34	.030	4B	VD	4	12 (k)	1/2P to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	8
Oldsmobile.....	6, 5360	6-3 1/2 x 4 1/2	29.40	252.6	120-3700	7.3	AL-A7-A	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	10B	DC	.022	34	.030	4B	VD	4	12 (k)	1/2P to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	8
	V6, Super 88	8-3 1/2 x 4 1/2	45.00	303.7	160-3600	8.0	AC-46-5	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	10B	DC	.022	34	.030	4B	VD	4	12 (k)	1/2P to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	8
	V8, Super 88	8-3 1/2 x 4 1/2	45.00	303.7	165-3600	8.0	AC-46-5	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	10B	DC	.022	34	.030	4B	VD	4	12 (k)	1/2P to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	8
	V8, 88	8-3 1/2 x 4 1/2	45.00	303.7	165-3600	8.0	AC-46-5	2-1 1/2	2-1 1/2	45	.015H	.015H	.015	10B	DC	.022	34	.030	4B	VD	4	12 (k)	1/2P to 1 1/2P	1/2N to 1/2P	1/2 to 1/2	8
Packard.....	8, 2601	8-3 1/2 x 4 1/2	38.20	268.0	160-4000	7.7	(m)	2-1 1/2	2-1 1/2	45	.010H	.010H	.013	15B	No	.015	25	.026	6B	VD	7	20	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5 1/2
	8, 2621	8-3 1/2 x 4 1/2	38.20	268.0	160-4000	8.0	(m)	2-1 1/2	2-1 1/2	45	.010H	.010H	.013	15B	No	.015	25	.026	6B	VD	7	20	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5 1/2
Pontiac.....	8, 2631	8-3 1/2 x 4 1/2	38.20	268.0	180-4000	8.0	(m)	2-1 1/2	2-1 1/2	45	.010H	.010H	.013	15B	No	.015	25	.026	6B	VD	7	20	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5 1/2
	8, 2602	8-3 1/2 x 4 1/2	38.20	268.0	180-4000	8.0	(m)	2-1 1/2	2-1 1/2	45	.010H	.010H	.013	15B	No	.015	25	.026	6B	VD	7	20	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5 1/2
	8, 2626	8-3 1/2 x 4 1/2	38.20	268.0	180-4000	8.0	(m)	2-1 1/2	2-1 1/2	45	.010H	.010H	.013	15B	No	.015	25	.026	6B	VD	7	20	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5 1/2
Plymouth.....	114	6-3 1/2 x 4 1/2	25.35	217.8	100-3500	7.1	AL-A7-A	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	12B	FP	.020	39	.035	2B	FP	5	13	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5-9 1/2
	6, P-24	6-3 1/2 x 4 1/2	30.45	268.4	(v)	(v)	AC-44-5	2-1 1/2	2-1 1/2	45	.010H	.010H	.014	12B	FP	.020	39	.035	2B	FP	5	13	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5-9 1/2
Studebaker.....	6, 14G	6-3 1/2 x 4 1/2	36.45	268.4	125-3600	7.5	CH-H-10	2-1 1/2	2-1 1/2	45	.015H	.015H	.015C	15B	VD	.022	37	.036	6B	VD	5	18 1/2	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5-9 1/2
	6, 14G	6-3 1/2 x 4 1/2	36.45	268.4	125-3600	7.5	CH-H-10	2-1 1/2	2-1 1/2	45	.015H	.015H	.015C	15B	VD	.022	37	.036	6B	VD	5	18 1/2	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5-9 1/2
	6, 14G	6-3 1/2 x 4 1/2	36.45	268.4	125-3600	7.5	CH-H-10	2-1 1/2	2-1 1/2	45	.015H	.015H	.015C	15B	VD	.022	37	.036	6B	VD	5	18 1/2	1/2N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	5-9 1/2
Willis.....	4, 475A	4-3 1/2 x 4 1/2	15.63	134.2	75-4000	7.4	CH-J8	2-1 1/2	2-1 1/2	45	.016	.016	.026H	9B	FP	.016	31	.030	TC	FP	4	11	1N to 1 1/2P	1/2N to 1 1/2P	1/2 to 1/2	8 1/4
	6, 685A	6-3 1/2 x 4 1/2	23.44	161.0	90-4200	7.6	CH-J8	2-1 1/2	2-1 1/2	45	.016	.016	.026H													

ABBREVIATIONS

- *—Powerglide chassis model available at extra cost.
- †—Hydramatic chassis model available at extra cost.
- (a)—121 1/2.
- (b)—Off seat.
- (c)—14B when hydraulic lifters are used.
- (d)—Left side to be 1/4" to 1/2" higher than right side, within these limits.
- (e)—Top 1 1/2", bottom 1 1/4".
- (f)—Top 1 1/2", bottom 1 1/4".
- (g)—Top 1 1/2", bottom 1 1/4".
- (h)—Top 1 1/2", bottom 1 1/4".
- (i)—Top 1 1/2", bottom 1 1/4".
- (j)—Top 1 1/2", bottom 1 1/4".
- (k)—Top 1 1/2", bottom 1 1/4".
- (l)—Top 1 1/2", bottom 1 1/4".
- (m)—Top 1 1/2", bottom 1 1/4".
- (n)—Top 1 1/2", bottom 1 1/4".
- (o)—Top 1 1/2", bottom 1 1/4".
- (p)—Top 1 1/2", bottom 1 1/4".
- (q)—Top 1 1/2", bottom 1 1/4".
- (r)—Top 1 1/2", bottom 1 1/4".
- (s)—Top 1 1/2", bottom 1 1/4".
- (t)—Top 1 1/2", bottom 1 1/4".
- (u)—Top 1 1/2", bottom 1 1/4".
- (v)—Top 1 1/2", bottom 1 1/4".
- (w)—Top 1 1/2", bottom 1 1/4".
- (x)—Top 1 1/2", bottom 1 1/4".
- (y)—Top 1 1/2", bottom 1 1/4".
- (z)—Top 1 1/2", bottom 1 1/4".

(g)—VD on D46; FP on D47.

- (h)—VD on D46; FP on D47.
- (i)—VD on D46; FP on D47.
- (j)—VD on D46; FP on D47.
- (k)—VD on D46; FP on D47.
- (l)—VD on D46; FP on D47.
- (m)—VD on D46; FP on D47.
- (n)—VD on D46; FP on D47.
- (o)—VD on D46

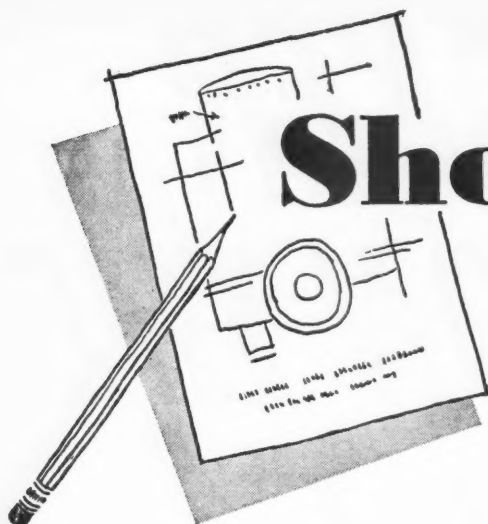
STUDEBAKER IS REALLY ON THE MARCH!

**A tremendous demand for
motoring's most advanced designing
is sweeping the country**



1953 STUDEBAKER

The new American car with the European look



Shop Kinks

If you've come upon an original idea for making a job easier, a special tool, short cut on a job or any trick of value to other readers, write it down and if necessary, make a rough sketch. Just make it clear. Send it to Motor Age. If we can use your Kink it may bring seven-fifty, possibly 25 dollars. All submissions become the property of Chilton Company. Because of the numbers received, no entries can be returned.

For The Best Kink Published Each Month . . . \$25

For All Kinks Published Each Month . . . \$7.50

If Fordomatic Shift Lever's Off Letters, Adjust Linkage

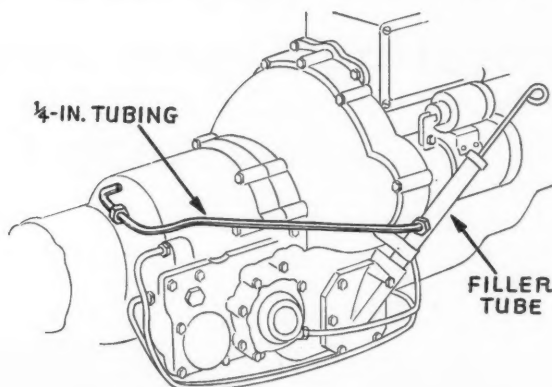
Sometimes on Ford's Fordomatic shift lever the car does not start in neutral and all the shifts are off the letters. To correct this, loosen the steering column and align, then adjust the linkage. *C. G. Kennington, Holly Motors Co., Aiken, S. C.*

Saw Crankshaft Pulley Hub To Center Timing Case Cover

If you don't have a tool to center the timing covers on 6-cylinder Plymouths, DeSotos, etc., just take a regular crankshaft pulley hub (the kind used for a vibration dampener) and saw it completely through the hub in line with the crankshaft, on the center line of the milled keyway. The hub will usually spread open when sawed, so it will be a slip fit on the shaft; if it doesn't, spread it so it will slip on and off easily. Just slip it on the shaft and through the oil seal. Then tighten the cover bolts down evenly and remove it and drive regular hub in place. This gives you a perfectly aligned cover and there are no oil leaks due to an off center cover. *Lawrence F. Mann, 1010 South Spring Ave., Sioux Falls, S. D.*

(Continued on page 76)

Best Kink of the Month



Fluid Vent for Powerglides

We have found that when the front end of a Powerglide is extremely low, the fluid will belch out of the filler tube until the fluid is low enough for the heated air to get out. To overcome this, I installed a vent. Remove the 1/8-in. pipe plug and replace it with an elbow that will receive a 1/4-in. tube nut. Run the tube down to a point on the filler tube just above the castings and drill a hole to take another fitting to receive the other end of the tubing. The air that is compressed above the oil can escape. We found that the trouble was the oil got above the filler opening in extreme conditions and blocked the air's escape. I used the tube for a return, because otherwise, when the car is on the road, the oil will fume out. This setup collects the fluid and returns it to the sump. *Robert N. Keane, Fitch Chevrolet, Mitchell, Indiana.*

Don't settle for 1/2 chrome!

No Chrome piston ring set is "complete" unless it offers the wear protection of solid chrome plating on the TOP ring, as well as the oil ring!

Here's why Perfect Circle's 2-in-1 Chrome Piston Ring Sets give *complete* wear protection. Thick solid chrome plating protects both the TOP ring ...operating where pressure is greatest, heat is highest, lubrication is poorest...AND the rails of the oil ring, for positive oil control without danger of scuffing or scoring!

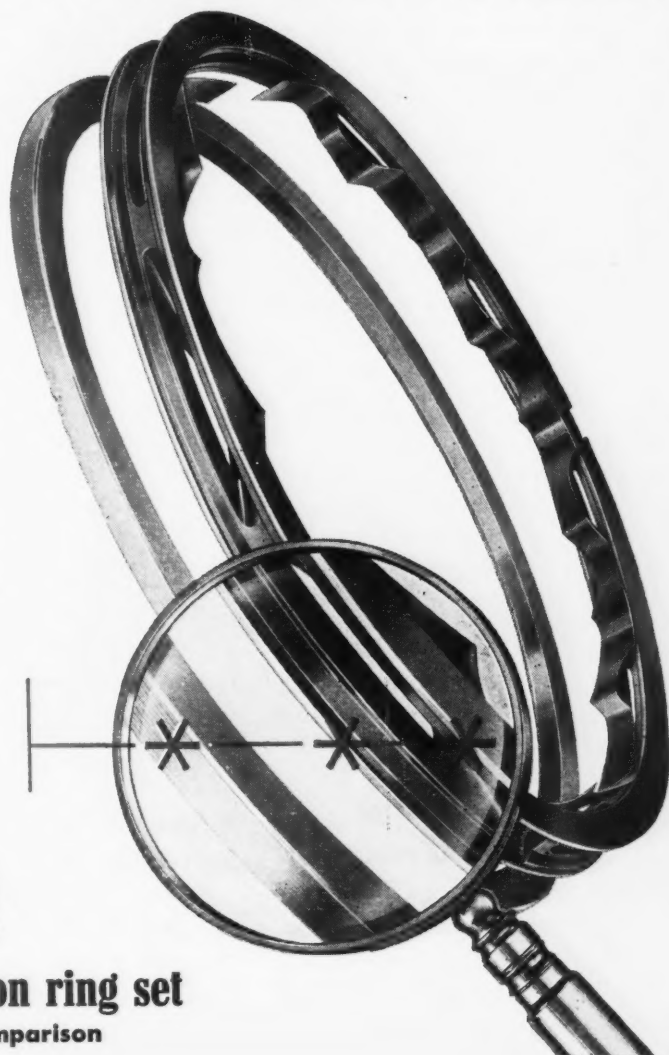
That's why 2-in-1 has established new standards of piston ring performance...why it seals compression and controls oil for *over twice as long* as old style rings. And only 2-in-1 furnishes an alternate HiPressure spring with each oil ring to assure positive control even in badly worn cylinders.

When you install a chrome set, make sure you get *complete* chrome protection. Don't settle for less than the best...2-in-1! Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.

Solid chrome plating on *both* the top compression and the oil rings gives **COMPLETE WEAR PROTECTION** through entire area of ring travel.

Perfect Circle

2 in 1 chrome piston ring set
The Standard of Comparison

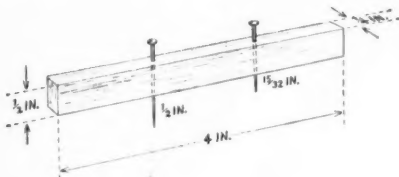


Timing Cover Oil Seal Leaks Eliminated on Ford Engines

I have found a successful method of eliminating timing cover oil seal leaks on 1952-53 Ford valve-in-head engines. I install a 1937 Ford V-8 timing cover oil slinger in the front of the crankshaft timing gear. Two cork timing cover gaskets have to be used to shim the cover far enough away from the slinger to keep it from rubbing. Gasket sealing compound should be used between the two gaskets. *Stanley Nuttall, Parsley & Jose, 541 "I" Street, Los Banos, Calif.*

Carburetor Float Gage Made With Board, Finishing Nails

One day I needed a carburetor float gage for a 1952 Mercury. Not having one on hand, I was able to make one that can be used on any Mercury or Lincoln, 1949 models on up, and on F-7 and F-8 Ford trucks.



Use any piece of flat level board approximately 1/4-in. thick; saw to measure 1/2-in. wide by 4-in. long. Drive two finishing nails through the center of the board for the gages. Drive the nail on the "go" side 1/2-in. below the board; drive the nail on the "no go" side 15/32-in. below the board. Lay the board over the top of the carburetor, nail ends down, therefore doing the same job as a gage. *Joseph B. Good, R. D. 1, Kirkwood, N. Y.*

Box Wrench Used to Install Rear Main Bearing Oil Seal

I have found a way to save time installing a rear main bearing oil seal on 1947 Plymouths. In the upper seal, the only way is to take down the clutch and take out the

fly-wheel. Now just use a thin curved 7/16-in. box wrench. Take the oil pan off and lower the main bearing cap. Using the wrench, take the three top bolts off the upper seal and it will come right out. To put back the side upper bolt, put a heavy cup grease on them and put them in the box wrench—they will go in easily. For the center bolt, take about eight or ten inches of lacing wire and make a hook in the center of the wire. Tighten this around the bolt and push the wire above the crankshaft. Use a light to see the top hole; in this way, you can center your bolt and guide it right in the hole. Use a screwdriver to get it started, then use the same box wrench. *Frank J. Bock, 4143 East Josephine St., San Antonio, Tex.*

Trouble Light Holder Made From Suction Cup and Clip

I have always had trouble holding the droplight when working on a motor job or front end work. No doubt many others have had the same trouble. Whenever you place a droplight under the hood, it is never in the right place and if you have the magnet type, you are always knocking it off.

I have a shop kink that may help others as it has helped me. Take the suction cup from the ski rack and a spring clip, using a 1/4 inch bolt to fasten them together. The suction cup will stay where you put it and the spring clip will hold the droplight in place. The suction cup will not scratch the paint on a fender or hood. *John D. Barry, Bradford Motor Co., 34 Bradford St., Lexington, Massachusetts.*

Wrench to Adjust Overhead Valves on Studebaker V-8's

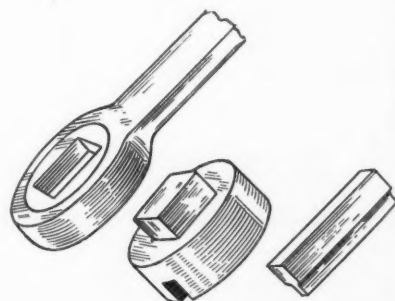
Here's a wrench I made to adjust overhead valves on 1951 to 1953 Studebaker V-8's. I take a 7/16 x 3/8 inch pipe line or flare wrench and cut the opening to just fit over the push rod. I slide the wrench up

on the adjusting screw and then it won't slip off. This method saves a considerable amount of time. *John Reniska, 2438 East Beverly Drive, Tucson, Ariz.*

Handle Large Size Screws With Ratchet Screwdriver

This device is simply an improvement on what is probably the most awkward tool in the kit—the screwdriver, especially when handling large size screws which balk at being turned.

Essentially, this tool is comprised of a head, permanently spot welded to an ordinary flat ratchet



wrench, and slotted to receive any one of four different gauge screwdriver blades, the sizes of which may be selected to include the most wanted or most used.

While the blades should be ground or machined out of good tool steel, the metal in the head may be of almost any mild steel. The blades fit snugly in the head slot and are permanently magnetized for facility in using the tool. *J. Brona, St. George, Utah.*

Hood Spring Removal Tool Made Out Of Strap Steel

Inexpensive and easily made hood spring removal and replacement tools are made out of strap steel of sufficient thickness to hold the spring extended without buckling. Use the hood as a lever to stretch the spring as far as possible and slip the tool into the spring coils as far as it will go. Use one for each spring. By moving the hood to the point where the spring tension would normally be released, the spring hooks can be slipped from

(Continued on page 124)

The Only Spark Plug Line With These Two Big Selling Advantages



1 ORIGINAL EQUIPMENT LEADERSHIP

AC Spark Plugs are original
factory equipment on nearly
as many new cars and trucks
AS ALL OTHER MAKES OF SPARK
PLUGS COMBINED.

2 PATENTED CORALOX INSULATOR

By resisting fuel and carbon
deposits to a greater degree
than any previous insulator,
CORALOX stays cleaner, result:
MORE POWER, BETTER MILEAGE,
LONGER SPARK PLUG LIFE.

AC

SPARK PLUGS

412. Spark Plug

Luthy Aeronautical Sales Company: The Luthy Aero Spark Plug has an aluminum oxide insulator designed to give greater thermal conductivity, thus absorbing and radiating heat faster. It features three electrodes surrounding the center nickel terminal. The manufacturer claims the three electrodes are factory set for the cor-

rect gap for each particular make of car. When the plug is first installed the spark will jump from the center electrode to any one of the three electrodes. When the gap between these two becomes slightly changed, the spark jumps to the next unused terminal. The spark always jumps to the closest opposite pole, even when that distance is not measurable by ordi-



nary means. This process continues to the third point and then repeats around so that the wear is distributed over three points instead of one. The manufacturer claims that this will maintain the correct gap in the electrodes three times as long as conventional plugs. They also claim that a hotter spark, improved insulator and correct spark gap will give as much as 200 more rpm to an engine.



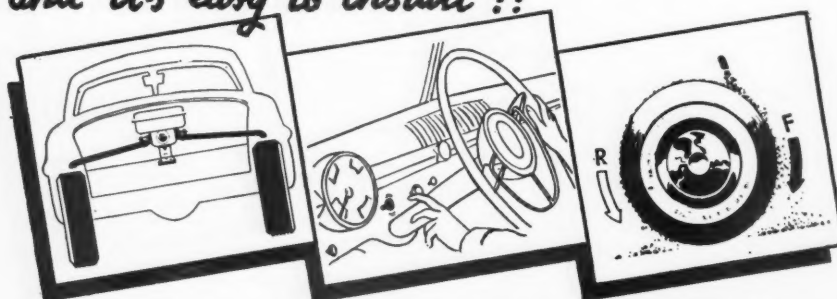
*Mr. Dealer..
HERE'S A NEW HOT ITEM
TO BUILD YOUR FALL
AND WINTER PROFITS!*

HECKER'S SKID GRIP

ELECTRO VIBRA SANDER

AUTOMATIC ROAD SANDER
the ONLY motorized road sander on the market!

and it's easy to install !!



● INSTALLED IN 1 HOUR

Only 5 holes to drill, no fussy cables to install. Removed in minutes for transfer to another car or for extra trunk space in summertime.

● DASHBOARD SWITCH CONTROLS

powerful 2-speed motor — gives you sure, continuous grit flow when you need it! **Hi-Speed** for starts on glare ice; **Lo-Speed** for continuous skid-free driving on icy road or hill.

● MOTORIZED FEED SPREADS

grit full tire width, assuring instant traction forward or reverse. No parts near road to be damaged or plugged; operates at top efficiency in any weather.

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US NOW —**



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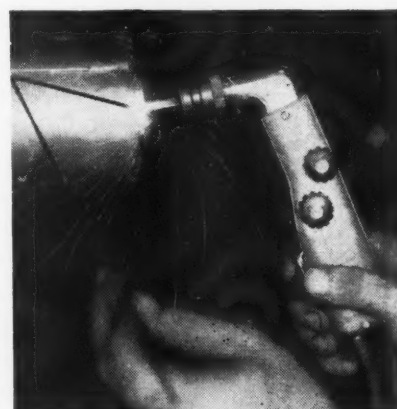
clip this coupon, attach to your
letterhead, and mail to:

HECKER PRODUCTS CORP.
50 State Street Albany, N. Y.

We will RUSH you full information on
SKID GRIP PRODUCTS

413. Hand Torch

Tonea-Hamilton & Associates: The Flamemaster Hand Torch, said to be ideal for tinsmithing, cutting, lead burning, extremely light weld-



ing and for hard or soft glass working, is being distributed by this firm. The torch has quick action needle valves with conveniently placed thumb control for the gas and air or oxygen supplies. The

(Continued on page 80)

Sign this franchise...

DEALER COPY

DISTRIBUTOR PLEASE NOTE IMPORTANT: Please mail the CERTIFIED DEALER'S copy of this agreement to Service Division, Thompson Products, Inc., Cleveland 3, Ohio, for approval and signing. Retain the DISTRIBUTOR'S COPY for your own files. We will return the CERTIFIED DEALER'S copy direct to the Dealer, and will also ship him, direct, the Certified Dealers decal see page 4 and catalogs.

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WE herewith make application for the Thompson Franchise

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- **ABOUT** the Thompson Products Certified Dealer Franchise that thousands of progressive automotive service shops have already signed.
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out the nation.)

- **ABOUT** the streamlined easy-to-read catalogs that have been produced specially for TP Certified Dealers.
- **ABOUT** the attractive TP window emblem (see cut) that identifies you as a TP Certified Dealer. This emblem ties you in with full-color Thompson national advertising that goes to 32,000,000 readers every month.



New Products Continued from Page 78

built-in leak proof economizer cuts off the gas or oxygen supplies when the operator's grip is relaxed and restores the flame when the torch is held in the hand. The same control enables a soft, warming up flame to be obtained by partial operation of the lever. The pilot flame is adjustable to suit different gas pressures. Five interchangeable flame units are available, providing

flames of 2 to 10 inches in length and various thicknesses. It is suitable for all kinds of work and temperatures ranging from moderate to very high.

414. Sander-Polisher

Cyclo Mfg. Company: An 8-pound sander-polisher, available in either air or electrically operated models, is designed for use in

either smoothing and filling base metal, feathering and polishing primer and all types of painted



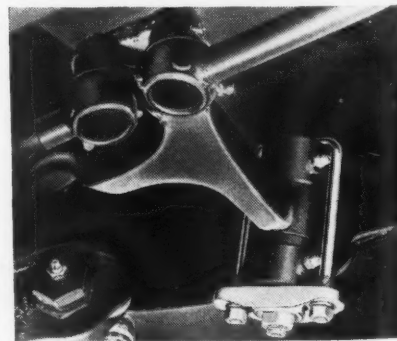
surfaces, for rubbing out overspray on enamel less than 48 hours old, and for finished wax and polish jobs. The maker claims finest hand finish results mechanically without swirl marks, burning, or scuffing. Counter balanced heads eliminate centrifugal action and enable novices to give the finest hand finishes the first time. No special bonnets are necessary and regular wiping cloths may be used for wiping up and final finishing.

415. Oil Additive

Presto - Moly Corporation: A non-settling molybdenum disulfide concentrate for addition to motor oil is known as Presto-Moly. It is claimed to increase power and mileage by plating the vital engine surfaces with a slippery, wear-proof film of this compound. The concentrate is poured directly into the crankcase along with whatever motor oil is being used. One treatment is said to last from three thousand to five thousand miles.

416. Steering Adjuster

Perfect Equipment Corp.: An adjuster for Chevrolet center point



steering has been placed on the market. This "third arm" adjuster (Continued on page 82)

**CUT TIME
AND
LABOR
IN
COSTS
TO 50%...**

PAINTING, UNDERCOATING
STEAM CLEANING
TIRE ROTATING
BRAKE & WHEEL SERVICE
UNDER-CAR REPAIRS
BODY & FENDER

with the LEE END LIFT

This portable, air-operated Auto End Lift raises and securely holds a car in any of 10 convenient work heights to 53". Mechanics work in a comfortable position, stationary lifts are left free for other work, profits increase as a result of time and labor saved. Capacity: 3000 lbs. Truck lift (5500 lb. cap.) also available.


YOU CAN SAVE from 25% to 50% in job time, and increase mechanic's efficiency as much as 50% with the LEE End Lift.

Write for Bulletin 201.



AUTOMOTIVE EQUIPMENT MFG. CO.
11008 SO. ALAMEDA STREET • LYNWOOD, CALIFORNIA





Who said there's no difference
in cork gaskets!

Cork is cork, they used to say, but that was long ago.

Now, like the engines they're used on, cork gaskets are being made better all the time. Yet one brand is way out in front with quality that helps you through every cork sealing job. And that's Armstrong-Victor!

What makes A-V gaskets better? Their cork, for instance, is milled to fine even-size grains. That means a more compact, firmer, tougher gasket structure. Then, Armstrong-Victor cork is electronically cured—not with steam as others do it. It's never over-cured or under-cured; always retains more of its natural liveliness. That's what gives A-V gaskets livelier, longer-lasting sealing power.

You never have trouble fitting A-V gaskets. They're cut clean and sharp with perfectly flat faces, straight sides and round holes. You know how that helps in making tight seals.

Yes, in A-V gaskets there's a difference that means better shop profits and greater customer satisfaction. Your Victor Jobber stocks them for all makes and models.

Victor Manufacturing & Gasket Co., P. O. Box 1333, Chicago 90, Ill.

Armstrong-Victor

CORK COMPOSITION GASKETS · CORK SHEETS

VIC CORKY SAYS:

This 2-notch trade-mark tells you it's a genuine Armstrong-Victor Replacement Gasket.



ment works on a principle whereby it suspends all the weight from the top of the bracket instead of from the bottom bracket bearing against the pin. By so doing, the weight is equalized between the top and bottom brackets. The Perfect adjuster acts as a retainer for grease in the bracket and when applied, it is said not to require removal of

the rubber bushing. It helps to eliminate front end noise, road shocks, car weave, excessive wear and front end play.

417. Body Equipment

Blackhawk Mfg. Company: A new Push-or-Pull Kit No. AZ-11 contains 28 items of Bantam "Porto-Power" hydraulic body jack



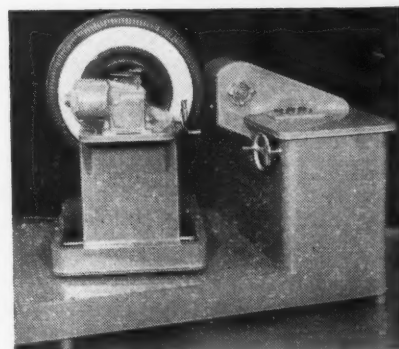
equipment and a steel carrying case. It includes a push ram, a pull ram, a hydraulic spreader, plus new Pull-Clamp attachments which eliminate chains. Because of the quick detachable Speed-O-Coupler, the change from a push to pull ram can be made in less than five seconds.

418. Oil Ring

Muskegon Piston Ring Company: The "Unitized" CSR-200 oil control ring is claimed to eliminate scuffing at run-off and for the life of the engine; to give higher level of oil economy for longer periods; reduce ring wear; reduce bore and friction. It is pre-assembled at the factory and bonded together with a special adhesive agent which dissolves in the heated engine oil during run-in. Therefore the ring is said to be easier and more convenient to install. This chrome-plated multiple piece ring is said to be all steel, unbreakable, and will not plug with carbon.

419. Tire Conditioner

Mabco Incorporated: A machine for conditioning tires, is designed

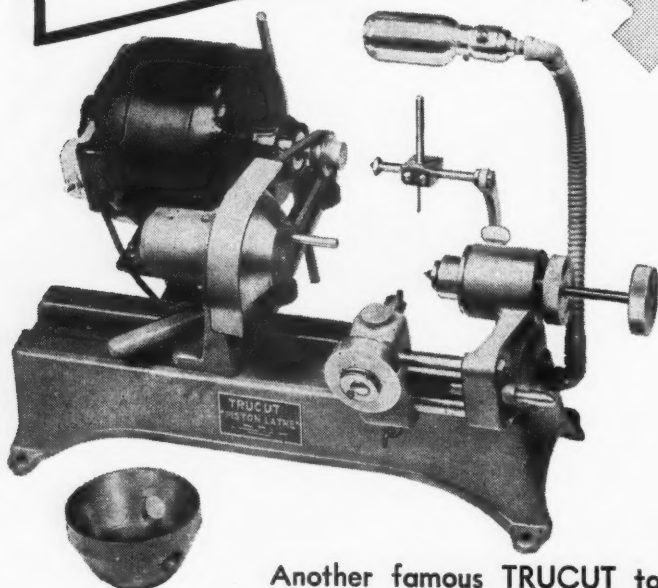


to remove all of the high spots of the tire, making it perfectly round. It is said not to affect the
(Continued on page 84)

Soon Pays for Itself!

**CLEANS, REGROOVES,
or DRILLS CENTERS,
Six Pistons in 6 Minutes!**

**TRUCUT
PISTON
LATHE**



Another famous TRUCUT tool, that soon *pays for itself* in extra profits. The TRUCUT PISTON LATHE regrooves pistons and cleans grooves faster than any other known method. It also drills centers in centerless pistons, accurately, and fast. The TRUCUT PISTON LATHE is a *power-driven* precision machine, especially designed for rapid and accurate re-ring jobs. It will pay you to write us for free details today!

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IN
RADIO
SALES** *ST*

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8,000,000 car owners will see the Motorola car radio story in national magazines in the next two months alone. And there will be more ads every month of the year! That's why you can be sure that when your customers think of car radios they'll think of Motorola. So—see the man from Motorola, stock up now on the full car radio line.

LOWEST PRICE EVER!

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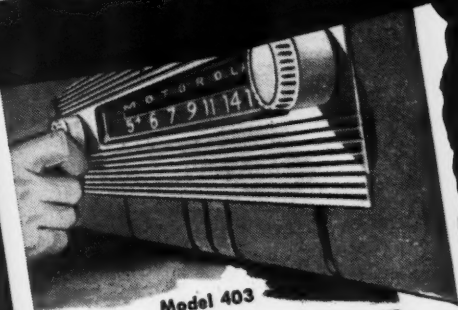


MODEL 553

PUSH BUTTON RADIO
ONLY \$54⁹⁵

Now—you can have real driving pleasure with a Motorola push-button radio at a sensationally low price—only \$54.95! It's easy to install in your car. New larger speaker gives new depth of tone never believed possible in a set so compact!

Five station push-to-lock control locks in the station; razor-sharp selectivity; full automatic volume control reduces fading. Low battery drain! So easy to install, it can be put in your car while you wait.



Model 403

**Motorola
Car Radio**
ONLY \$39⁹⁵

Imagine a powerful, magnificently toned radio like this at such an unbelievably low price! High fidelity, superior tone, extra range and power. Patented motor noise filter, automatic volume control, big speaker and control head adaptable to instrument panel. So easy to install, it can be put in your car while you wait.

Motorola *The Golden Voice of* **Radio**

wearing tread of the tire, only the excess rubber is trued off. The manufacturer recommends that before tires are conditioned that new ones should be driven for 1500 miles and recaps for 500 miles. After this trial break-in period, tires that are trued and balanced do not warp and will remain round and balanced.

420. Squeal Stopper

Graton & Knight Company: A new "hood opener" to help the service station operator sell more oil is a new squeal-stopper for automobile and truck fan belts which can be applied to the fan belt safely while the motor is running. It's Grako Sprazon Belt Dressing—a liquid which is said



to stop fan belt squeal at one shot and also helps the belt pull without slipping. The Spraytainer package holds 12 oz. and operates with a finger valve. Operator directs the spray onto moving belt and pulley while his hands and arms are safely out of danger.

421. Tire Sealer

The Puncture Seal Corporation: Puncture Seal is a product which is claimed to make any tire completely puncture-proof. It is squeezed through the valve stem into the tube. It automatically becomes bonded to the tube walls on contact without losing its sealing qualities. Puncture Seal spreads evenly in the tube for perfect wheel balance and is said never to be affected by temperature changes.

422. Lifter Tool

I. R. Athearn Mfg. Company: The problem of lifting hydraulic



valve lifters from Buicks and Chevrolets has been solved by a
(Continued on page 86)



Brake Linings Have Lifelines, Too

And, the life of the brakes could mean the life of the driver. Advise regular brake check-ups and where new linings are indicated, install Rusco Fused Fabric, the brake lining with the longer lifeline. Because of its unique, patented construction, Fused Fabric has greater density, greater strength, greater resistance to heat and wear. Properly installed, it gives at least 50% more mileage!



RUSCO

Fused Fabric

BRAKE LINING

THE RUSSELL MANUFACTURING COMPANY, MIDDLETOWN, CONN.

100,000th enrollee in Tech program is young Korean War veteran

To a young Korean War veteran, now building a new civilian career, goes the distinction of being the 100,000th man enrolled in a national training program for automobile mechanics.

He is the newest student in the Master Technician's Service Conference — Master Tech, for short — a continuing technical correspondence course prepared by Chrysler Corporation and administered by its dealers for training their service personnel.

Mr. "One-Hundred-Thousand" in the Master Tech program is Elwood Fathergill, 21, of Lexington, Kentucky. Fathergill, who has just returned to civilian life after a year in Korea, recently started work for Goodwin Brothers, Dodge-Plymouth dealer in Lexington. From discussions about incendiary grenades, angles of impact and night patrolling, Fathergill now is talking about planetary gears, compression ratios and overrunning clutches. He is training to become a skilled mechanic with the help of the Master Tech program and his foreman, William Ramsey, a veteran mechanic who has taken the Master Tech course for over five years.

Clear, interesting instruction

Once a month Fathergill and fifteen of his co-workers attend their Master

Tech class. First, they are shown a slide film with a synchronized phonograph record. Each film has been carefully edited by factory engineers and service experts and deals with some important aspect of automotive service. When the film is over, service reference books are distributed and there is a discussion period with the aid of specially prepared charts.

The conference leader at Goodwin Brothers is Cecil Hardwick, the Service Manager, who has been with the firm for 31 years. At the end of the discussion period he gives the "students" questionnaires to test what they have learned. After completing, they are sent back to Detroit where they are carefully checked and graded.

Accurate records are kept of each student's progress. At the end of each year of successful work Fathergill will receive a certificate. As he progresses in the course he will receive additional awards for extra achievement.

The dealer's role

All of the course material is developed by Chrysler Corporation and is purchased by dealers. The program is supervised by an advisory committee made up of the Directors of Service of Chrysler Corporation.

At present there are 8718 dealers in the United States subscribing to the program. With the materials that he receives, the dealer, his service man-

ager, or whoever is selected to be the conference leader, can give thorough instruction in such technical subjects as the operation of cross and roller type universal joints; how to derive the full potential from the high compression Hemispherical combustion chamber; the operation, maintenance and service diagnosis of power steering; and other complex subjects.

A continuing program

So far, 66 lessons are available with new ones being added every month.

The Master Tech program is now in its sixth year and is being used in almost every corner of the free world. The course has been translated into many languages including Hindustani, Flemish and Siamese. It has not always been easy, however, to translate the course and retain its informal atmosphere. For example, "oversized shock absorbers" translated into Swedish becomes a jaw breaking "overdimensionearadestotdampare." In spite of the language barrier, however, thousands of foreign mechanics are taking the program.

Whether in the United States or abroad, automotive service men are enthusiastic about the Master Tech program. One mechanic expressed this reaction: "In all my years in the repair business, I can't remember any training program as helpful and as complete as this one. All the boys certainly like that little guy 'Tech.'"

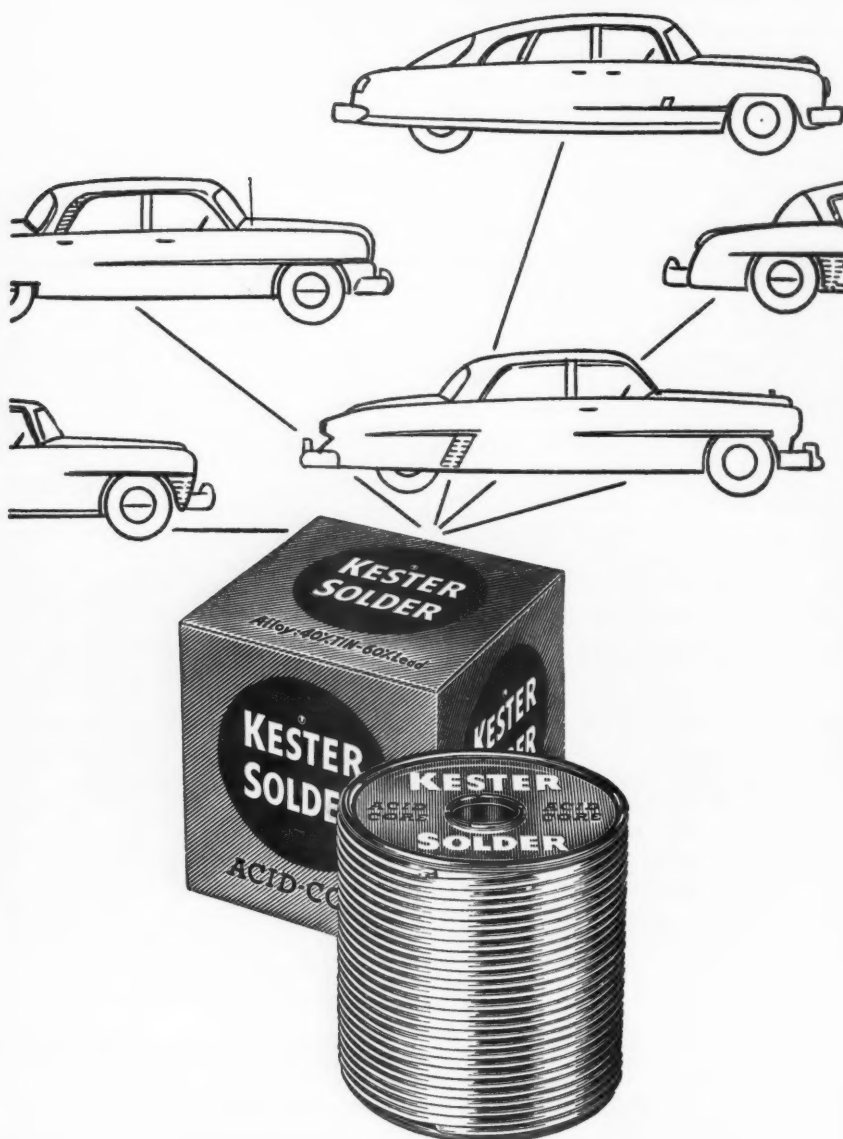
CHRYSLER CORPORATION

PLYMOUTH, DODGE, DE SOTO,
CHRYSLER and IMPERIAL



Cecil Hardwick, Service Manager at Goodwin Brothers, congratulates Elwood Fathergill for being 100,000th "student" to enroll in the Master Tech program.

FORGET THE REST...



KESTER'S BEST

**KESTER
SOLDER**

KESTER SOLDER COMPANY

4242 WRIGHTWOOD AVENUE, CHICAGO 39, ILLINOIS
NEWARK 5, NEW JERSEY • BRANTFORD, CANADA

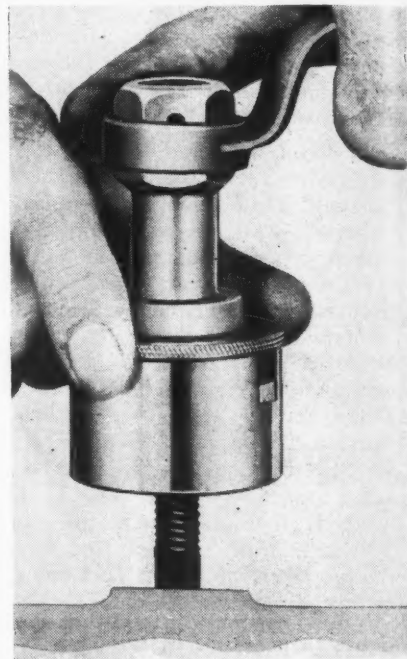
New Products . . .

Continued from Page 84

tool known as the "Quick Lift," according to its manufacturer. The light weight tool removes valve lifters trapped by carbon and "sludge" in five to ten minutes.

423. Stud Wrench

Clark-Feather Mfg. Company: A stud wrench for industrial and automotive applications has a built-in ratchet. The self con-



tained tool is available in two sizes to handle any outside diameter from $\frac{1}{4}$ inch to $\frac{3}{4}$ inch, regardless of contour. SW-1, with capacity through $\frac{1}{2}$ inch, takes either internal $\frac{1}{2}$ inch square or external 1 inch hex drive. SW-2 takes $1\frac{1}{4}$ inch external hex drive and is hollow to accommodate any length stud. Its capacity is $\frac{17}{32}$ inch to $\frac{3}{4}$ inch inclusive. The
(Continued on page 90)



Al Kalman
Detroit, Mich.
says . . .

IT'S YOUR BUSINESS

. . . or is it?

SEE PAGES 104-105

"I'M SLOW SPOKEN with fast talkers"



Time was when fast talkers could hypnotize me into buying undercoats that claimed "everything plus." But not any more! I just wait 'em out and then tell 'em slowly, "I'm using undercoats that I know have everything—Martin-Senour . . . and they're balanced. I always turn out a top-quality job because with Martin-Senour Undercoats I get good adhesion to bare metal or the old finish. Filling qualities can't be beat. I get fast, fast drying so my sanding is far easier. And man, you've never seen such excellent color holdout! What happens? Martin-Senour gives me the balanced-formula primer surfacers that make my customers boast rather than 'beef'!"

**LIGHT GRAY...DARK GRAY...RED OXIDE
ALL MARTIN-SENOUR UNDERCOATS GIVE
YOU THESE 5 IMPORTANT BENEFITS IN
ONE BALANCED FORMULA**



All Martin-Senour primer surfacers are guaranteed to contain no graphite. They have unexcelled resistance to moisture and humidity. They have the highest rating on resistance to cracking of any undercoat on the market plus the finest adhesive qualities. Available in "Rotating-Flow" agitator drums.

6252—Light Gray 6255—Dark Gray 6256—Red Oxide

See Your N.A.P.A. Jobber for Martin-Senour Undercoats

MARTIN-SENOUR

2520 South Quarry Street, Chicago 8, Illinois



Factory Packaging ... the only positive control from Factory to Finisher



RECOMMENDED FOR...

"OPERATION MS" IS START-STOP DRIVING

most severe of all operating conditions, according to the new service classifications of the American Petroleum Institute. Here's the official A. P. I. statement on oil contamination from start-stop driving: "Start and stop service promotes condensation in engine cylinders and crankcases of water from fuel combustion and also dilution of the oil with unburned fuel; it can promote corrosive wear of cylinders, pistons, and rings, also oil ring plugging, varnish deposits and low temperature emulsion type sludge."

**WALKER OIL FILTERS MEET
THE EXTRA REQUIREMENTS
OF "OPERATION MS" —
REMOVING BOTH SOLID
CONTAMINANTS AND
HARMFUL WATER THAT
ENDANGER**

9 OUT OF 10 ENGINES



THE ENGINE PUTS IN

ROAD DUST From Engine
Breathing

CARBON SOOT From Engine
LEAD SALTS Combustion

METAL PARTICLES From
Engine Wear

MOISTURE From Engine
"Blow-By"

WALKER TAKES OUT



"..OPERATION MS" (MOST SEVERE) → MS"

The American Petroleum Institute classifies everyday start-stop, low-speed traffic idling driving as Service MS, the most severe of all operating conditions. This is the driving pattern of 9 out of 10 of your customers.

Under "Operation MS," the engine seldom really warms up—maximum combustion blow-by creates soots, carbon, lead compounds and the most objectionable of all contaminants, *water in the oil*.

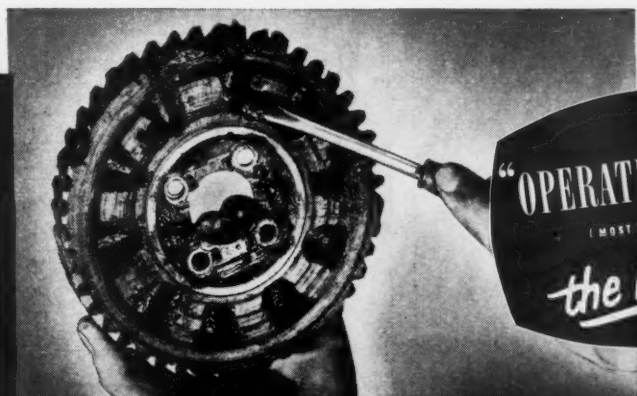
Water in the oil is the chief cause of sludge, most important source of engine operating difficulties. Water in the oil is the source of corrosive crankcase acids, a major cause of engine wear.

Walker Oil Filters are recommended for "Operation MS" (Most Severe) because they remove

solid contaminants from the oil . . . and *water, too*. Walker patented *Laminar* construction takes out dust, dirt and abrasives through famous 3-way filtration. And the exclusive *Laminar* filtering material selectively removes water from the oil . . . helps keep the moisture content below the critical "sludge danger zone" . . . minimizes acid wear by absorbing the acids contained in the water removed from the oil.

Walker Oil Filters are designed to protect oil and engine under the most severe of all operating conditions.

No other oil filter more completely meets the *extra* requirements of "Operation MS." No other oil filter more completely meets the needs of 9 out of every 10 motorists.



"OPERATION MS"
(MOST SEVERE)
the result



WALKER OIL FILTERS

WITH PATENTED *Laminar* CONSTRUCTION



New Products Continued from Page 86

milled jaw teeth bite with progressive power for either right or left turns. The studs are released with a turn of a knurled collar.

424. Detergent

Weaver Manufacturing Company: A new, highly concentrated detergent called "Weaver-Gloss" has been introduced. This deter-

gent was especially developed for use with the new Weaver Automatic Car Washer. One gallon of "Weaver-Gloss" is said to make five gallons of solution. According to the manufacturer, the detergent is chemically pure, non-abrasive, non-corrosive and contains an ingredient which cleans and brightens surfaces. It is reported to

clean and protect waxed surfaces, dry without streaking and will not attack painted or metal finishes. It is also recommended for removing bugs, tree sap, grease and oil spots, and for cleaning white side walls.

425. Shop Horse

Auto Specialties Manufacturing Company: A pin type shop horse has been added to the Auto Specialties' line of mechanical and hydraulic jacks and ratchet-type trestles. Rated at two-ton capacity, this Drednaut horse is tested to withstand a minimum 50% overload. It has an 8 inch by 8 inch base, a low height of 12 inches and a raised height of 20 inches. A stamped steel base is ribbed to provide added strength while the upright post and extension bar are constructed of heavy duty mechanical steel tubing. The load rest is self-positioning.

RUST MASTER'S NEW ROUND

IDEAL WATER PUMP LUBRICANT
PREVENTS AND REMOVES RUST

Rust Master
for Cooling Systems

• Removes Rust as You Ride
• No Overheating or Clogging
• No Draining or Flushing
• No Deposits or Scale

Leak Master
FOR COOLING SYSTEMS

• STOPS RADIATOR LEAKS
• RETARDS RUST
• IMPROVES WATER CIRCULATION
• PREVENTS NO DRIPPING OR FLUSHING
• REMAINS IN SUSPENSION LONGER
• FUNCTIONS PERFECTLY WITH STANDARD ANTI-FREEZE OR ALCOHOL
• SAVES LEAKING OF ANTI-FREEZE

DISPLAYS THAT PAY

These two famous Rust Master products are now available in handier round cans. Display 'em pyramid style—and watch sales go sky high. They're guaranteed Tamper Proof . . . give added sales protection for you and your customer. **BUT**—The products are the same. Rust Master and Leak Master are still tops for servicing cooling systems. You take a big step toward volume profits when you . . .

RIDE WITH RUST MASTER PRODUCTS
PRODUCTS WORK WHILE YOU RIDE

Chemical Company
Mfg. Chemists

50-56 CREIGHTON ST., CAMBRIDGE, MASS.
THE SILENT PARTNERS OF MOTOR EFFICIENCY

ELITE RIDING ACADEMY

BEGINNERS TAUGHT
FEATURING
DUAL CONTROL

" . . . We just started using dual control, but we must confess that we aped the Apex Auto Drivers' School."

426. Alignment Gauge

Brake and Wheel Equipment Company: The B-Y-B alignment gauge is designed to check and set toe change under various loads, normal toe-in and straight ahead position. The gauge will detect vertical bends in steering arms, idler arms or pitman arms. The manufacturer states that the instrument is basically a flexible square. This is the only method of determining a true straight ahead

(Continued on page 92)

For Next Winter's SALES

Trico's *NEW* Arctic

with **SELF-DE-ICING** HOOD



IF IT'S
RAINING
—a perfect
wiper!



IN FREEZING
ROAD SPLASH
—it sheds
the ice!



IF IT'S
SNOWING
—it can't
clog!

For the first time in automotive history, here is a self-de-icing, non-clogging Wiper Blade for winter driving wherever there's snow, sleet or freezing roadway slush.

Ice-repellent hood flexes to shed ice and ward off clogging snow... keeps soft-rubber wiping edge free for perfect wiping action. It can't stiffen.

Can be snapped off and stored in glove compartment when the driver wishes to replace it with his standard Trico Rainbow or Triple-Action Blade for summer driving.



Wiper Blades

Trico Products Corporation, Buffalo 3, N. Y.

New Products Continued from Page 90

position for checking trackage or center steering, and the gauge has a graduated scale which transfers toe from inches to feet per mile.

427. Headlight Dimmers

Techniflex Corporation: The Techtronic Eys is an automatic headlight dimmer which is available for installation in the field.

It functions whenever, and only, when the car's "open-road lighting" equipment is sent into action. The driver is completely relieved of manually switching light beams. In regular pattern of functioning, an oncoming car moving with its "bright lights" engaged, would cause the device to undergo a switching action as soon as it

appears on the device's "horizon." The headlights automatically go from bright to dim, and stay that way until all oncoming traffic passes, then they return to bright. The beam is factory set, so that the lights dim automatically at a distance approved by all state Motor Vehicle Bureaus. Each unit comes with an instruction book and all parts are color coded for installation.

428. Combination Gauge

Rinck McIlwaine, Inc.: A new Combination Gauge for checking fuel pumps and engines has been announced recently. This gauge, under the name of Rimac, checks both vacuum and compression of fuel pumps—analyzing and locating weaknesses such as punctured diaphragm, leaky valves, or leaky gas line. One of the outstanding features of the Rimac Combination Gauge, is the zero adjustment.

★ Announcing!

... a new and better

heavy duty welder and battery charger



**For Production,
Maintenance
& Repair Work**



The Mid-States BULLDOG is aptly named. It's that tough! The new BULLDOG is a heavy duty model, designed, engineered and built to meet all repair, production and maintenance work. You, like thousands of other users, will find this combination welder and battery charger delivers unvarying, trouble-free performance. No moving parts, transformer carries 5 year burn-out guarantee. Equipped with dual voltage charger capable of charging either 6 or 12 volt batteries. Automatic tapering charge serves as safeguard against battery damage by gradually reducing amperage rate as battery reaches full charge. Furnished complete with helmet, welder cables, battery cables.

Model 175-A.C. Arc Welder

Model 175-BC—Combination arc welder and battery charger. Shipped complete with accessories as illustrated. Size: 16" Wide, 13½" Deep, 20" High. Shipping Weight: 136 pounds.

Send Today for Free Descriptive Literature

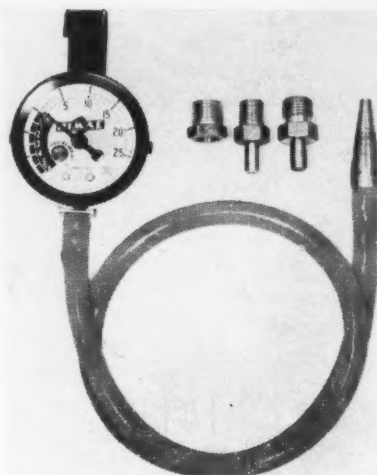
REA — Specifications — NEMA

Amp Range 15-175	Duty Cycle 50%	Max. Open Cir. Volts 65	Primary Amps 33	Power Factor 75%
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Mid-States WELDER MFG. CO.

6025 SOUTH ASHLAND AVENUE • CHICAGO 36, ILLINOIS



According to the manufacturer, should the point not return to zero, the gauge need not be returned to the factory for repair. It is simple to adjust. Remove the glass dial face and turn recalibrator screw. This will not disturb the accuracy of the readings.

429. Cigarette Lighter

Seaboard Steel and Plastic Corp.: The Cig-O-Mat lighter plugs into the present cigar lighter attachment and actually lights the cigarette. The cigarette is inserted, a button is pressed and when it clicks, your cigarette is lit, ready to smoke.

(Continued on page 94)



YOU'VE got to have a compressor you can depend on, for a compressor that has seen its best days costs you money constantly in delayed jobs, bad tempers and never-ending repairs.

A new Westinghouse Air Compressor is the answer to a situation like this. Every feature of Westinghouse design is pointed toward years of trouble-free service.

Such Westinghouse exclusives as *low oil level protection* (the compressor will not pump air when oil is below the proper level), *positive starting unloader* (rated motor speed must be attained before loading the compressor) and *controlled pressure lubrication* give the positive protection that assures long life.

See your Westinghouse Air Compressor dealer—he's listed in the classified section of your telephone directory. He'll recommend the Westinghouse model with ample capacity for your present air equipment and some to spare for new tools you may install. And he'll always be available to give you prompt service if you need it.



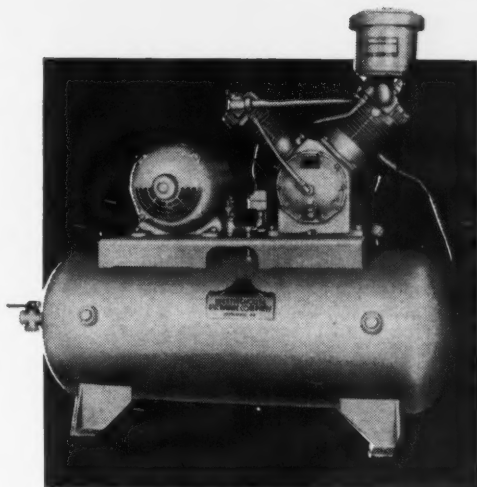
Westinghouse Air Brake COMPANY

INDUSTRIAL PRODUCTS DIVISION

WILMERDING, PA.

Factory Branch: EMERYVILLE, CALIF. Distributors throughout the United States . . . Consult your Classified Directory. Distributed in Canada by: Canadian Westinghouse Co. Ltd., Hamilton, Ontario.

Chilton's MOTOR AGE, SEPTEMBER, 1953



WESTINGHOUSE MODEL 15 HP "Y"
WILL DO THE JOB

This new 15 hp Westinghouse "Y" with a displacement of 68 c.f.m. is large enough to handle all your needs. And there's a complete range of smaller sizes down to 1½ hp with 7.4 c.f.m. They give you the high pressure needed for jobs requiring high pressure, and, with the addition of a Westinghouse Reducing Valve, fixed low pressure for jobs like spraying or polishing.

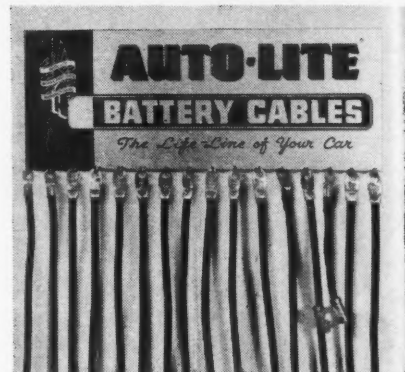
430. Tinning Compound

Farrelloy Company: Hy-Tin is a paste containing powdered solder suspended in a powerful flux which cleans and tins in the same application, cast iron, stainless steel, monel, cast steel, copper, brass, galvanized and lead coated steel. It is claimed to be stable and non-active at normal temperatures, but

at soldering temperature turns liquid and is powerful enough to remove the scale and to tin black iron. It clings to any object and is easy to work in either horizontal or vertical position.

431. Cable Display

Electric Auto-Lite Company: A newly designed battery cable wall



board is being made available by Auto-Lite to distributors, jobbers and dealers. The wall board is 24-inches long and is capable of displaying 16 battery cables.

432. Brake Fluid

Thermoid Company: Several additions to and improvements in the Thermoid line of Hydraulic Brake Fluids have been announced. A new 12 ounce can of moderate duty fluid offers the right amount of fluid to service most cars without leftovers. This new can has a funnel top to make pouring easy and a snap-on lid which keeps the fluid clean at all times. Thermoid also announces that the entire line of containers are redesigned to eliminate possibility of confusing Moderate Duty Fluid with Heavy Duty Fluid.

433. Plastic Visor

Chicago Precision Machine Company: The "Fair-View" contoured transparent visor is designed to fit all 1953 cars as well as older models. It is said to give complete glare-free protection over the entire glare zone, and protect the driver against rain, snow and sleet as well as from the sun's glare. The panels are all transparent plastic with stainless steel trim. It is available in green and blue-green.

434. Filter Sheet

Purolater Products, Inc.: A new oil filter specification sheet which tells exactly what type of filter refill is required for all 1953 models of cars, trucks, tractors and buses, has been prepared by the above company. It is available from jobbers or oil companies.

(Continued on page 98)

OUT OUR WAY



Tops the field — in sales and value!

SOL-SPEEDI-DRI®

"Dry cleaning" with Sol-Speedi-Dri is America's favorite way to keep floors clean and slip-proof. Sol-Speedi-Dri is the largest selling oil and grease absorbent in the country. That's because pound for pound, dollar for dollar, it gives you *more for your money*, all factors considered. You can count on consistent quality, too—careful laboratory controls see to that. Send coupon today for free sample.

Warehouse stocks maintained in principal cities of the United States and Canada.

Inquirers in New York, New England, and New Jersey should write to Speedi-Dri Corp. Elsewhere in U.S. to Waverly Petroleum Products Co., 1724 Chestnut St., Phila. 3, Pa. In Canada, G. H. Wood & Company, Limited, Toronto. Branches throughout Canada.

SPEEDI-DRI CORP.
210 W. Washington Sq., Phila. 5, Pa.



FREE SAMPLE:

Fill out the coupon and mail today for free sample and literature.



Name _____
Address _____
City _____ State _____

MA-9-53

How to get more Fords in for winter service -



Servicing more Fords for winter can mean more profits for you—if you're set up to attract them

Here's your very first move: *Right now* get in a supply of Genuine Ford Anti-Freeze and Batteries so that you're ready for the rush of winter change-over jobs. Then, don't hide this good, salable merchandise. Put both products out where even passing motorists can see them. When actual Ford owners know that you carry the right Genuine Ford Products for their special needs, they'll be lots easier to sell on *complete* winterizing jobs. That'll mean still more profit for you.

What's more, Ford's hard-hitting, nationwide winterizing campaign will break this fall just when every car owner is ripe for this service. Full page advertisements will appear in the country's most widely read magazines . . . LIFE, SATURDAY EVENING POST, COLLIER'S and TRUE. These ads will remind Ford owners to look for Genuine Ford Products for their winter change-over needs.

Get this sign!

Display it outside your shop. It's an invitation to Ford owners that will help increase your business . . . and costs you nothing. Mail coupon now!



Let these star salesmen do the selling for you



Tested to go at 30 below!

That's colder than it will probably get this winter . . . but that's what Ford batteries are tested to take. And they're tailored to a Ford's ignition requirements . . . a sure customer pleaser!



Ford Permanent Anti-Freeze

Developed and tested specifically to be best for a Ford's cooling system. One filling lasts all winter in a properly working cooling system. Contains a rust inhibitor.



Ford Regular Anti-Freeze

Gives safe, dependable cold weather protection to Fords at low cost. Tests prove that it also gives more anti-rust protection than many similar types. And it needs only occasional checking during the winter. A popular member of the Ford-tested winterizing team!

MAIL COUPON TODAY!

PARTS AND SERVICE SALES DEPARTMENT

Ford Division, Ford Motor Co., Box 658, Dearborn, Mich. Please send me complete information telling me how independent garages can get a Genuine Ford Parts sign. I'd like to cash in on this, too!

FIRM NAME _____

INDIVIDUAL'S NAME _____

ADDRESS _____

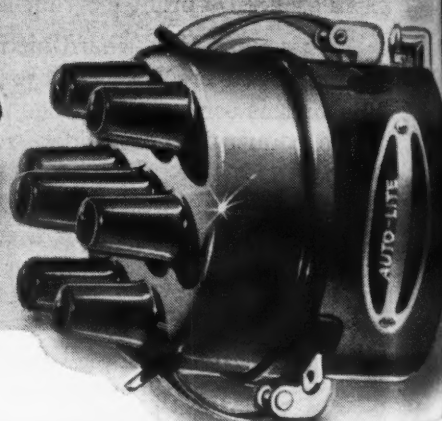
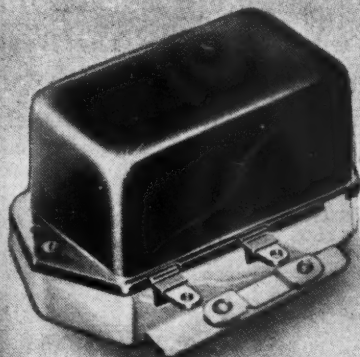
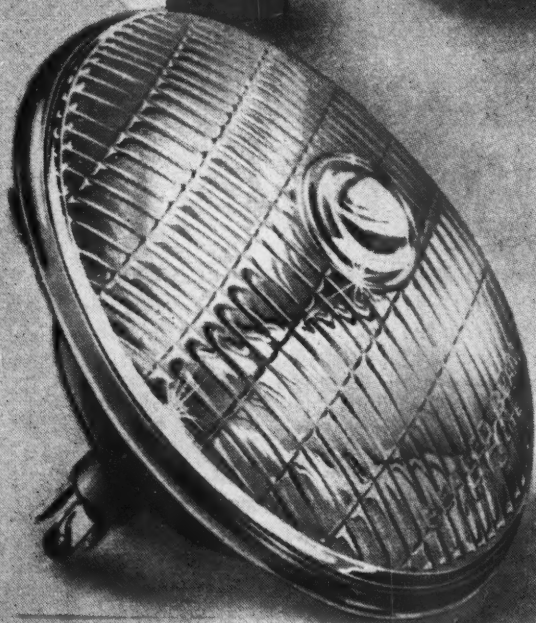
CITY _____ STATE _____

H

1 out of every 3 cars in A

AUTO

AUTO-LITE WIRE AND CABLE,
in spools and package sets . . . a
standard of quality for every
automotive, marine, aviation and
industrial electrical use.



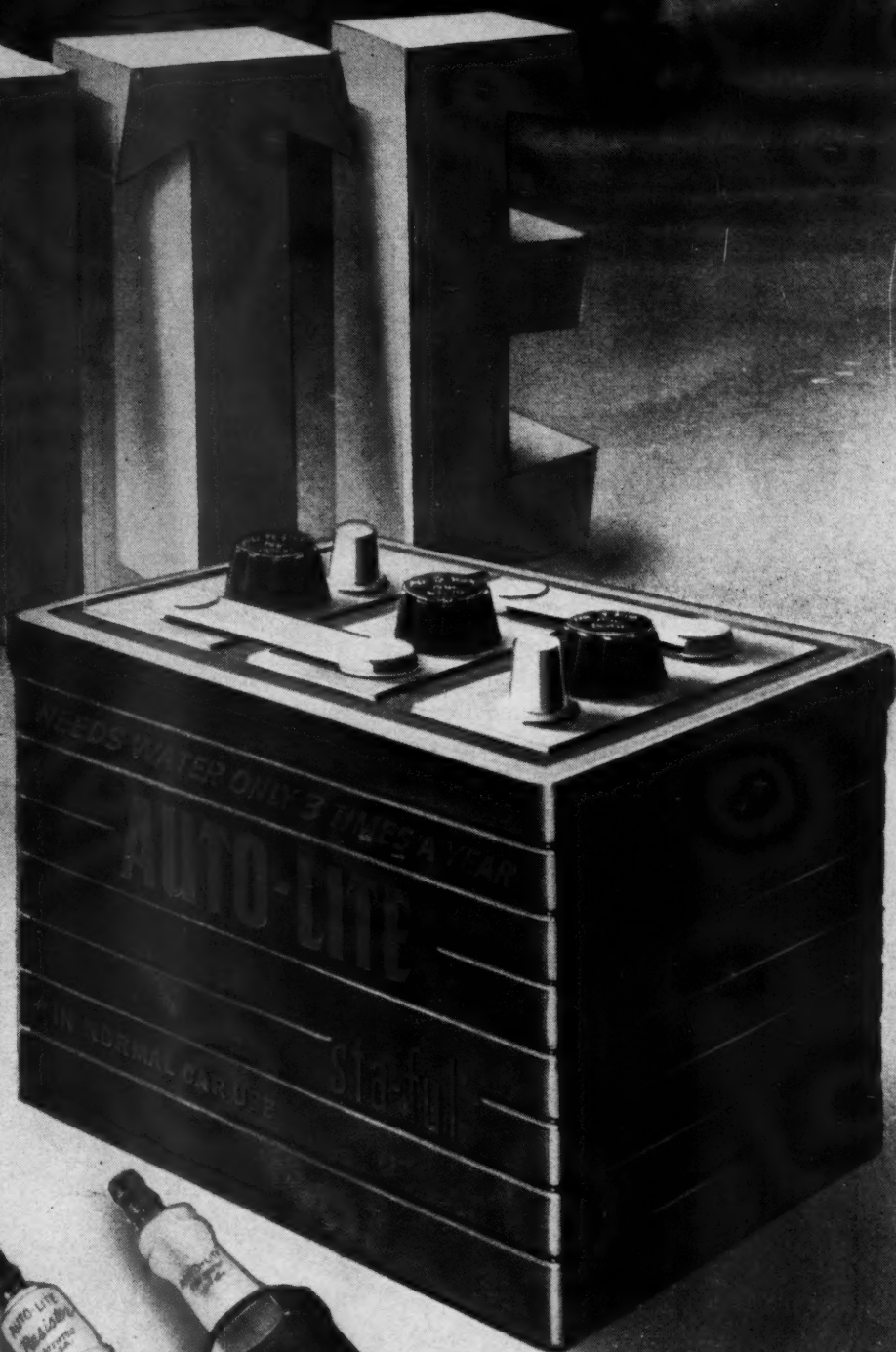
AUTO-LITE BULL'S EYE SEALED BEAM UNITS are
designed for safe night driving. They concentrate
more light on the road . . . burn even when the lens
is cracked or broken.

AUTO-LITE ORIGINAL SERVICE PARTS
include generators, voltage regulators, starting motors, dis-
tributors, coils and thousands of electrical and mechanical
component parts engineered for best car performance.

THE ELECTRIC AUTO-LITE COMPANY

n America is equipped with

● Outstanding quality and performance have made more than 400 Auto-Lite products for cars, trucks, tractors, planes, boats and industry world famous . . . convincing proof, "You're always right with Auto-Lite."



AUTO-LITE SPARK PLUGS

. . . Ignition Engineered to give top performance in your car . . . include a complete line of Resistor, Standard, Transport and Marine types.

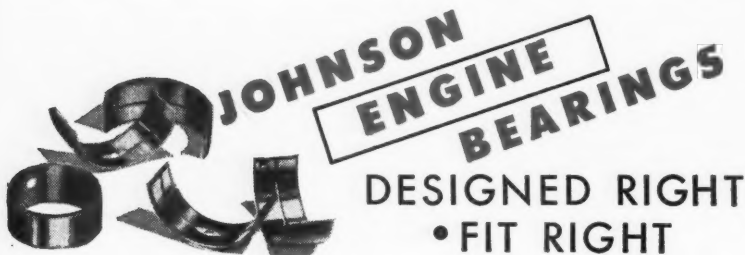
AUTO-LITE "STA-FUL" BATTERIES need water only 3 times a year in normal car use. And they last longer!

TOLEDO 1, OHIO

435. Shop Press

Owatonna Tool Company: A new hydraulic shop press capable of developing 17½ tons, is now on the market. It is equipped with the 17½ ton power twin ram, which serves a dual purpose since it can be detached from the press and used as a portable power unit. This unit is said to be readily at-

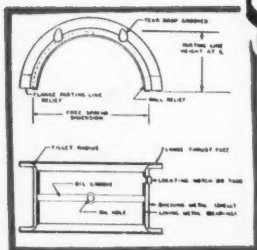
tached to the company's Grip-O-Matic Pullers and Push Pullers for field or shop maintenance operations and can be used as a lifting jack as well. The press comes equipped with a new hydraulic hand pump which develops 10,000 psi, and a 6-ft. high pressure hose connects the pump and ram.



Do you know why bearings are designed a certain way? Do you know the correct method of installing each type? Johnson engineers, bearing specialists, have prepared the Johnson Automotive Bearing Manual to guide you in removing, installing and maintaining bearings. There are many tips like the one shown here that may help you. Write us on your business letterhead and we'll send you a copy free.

JOHNSON BRONZE COMPANY
455 South Mill St., New Castle, Pa.

Fig. 14.



The flanged main bearing (Figure 14) is employed to take the thrust forces which are exerted on the crankshaft when the clutch is engaged, and from the normal thrust vector of the helical transmission gears.

Tear drop grooves are machined into the thrust face to act as oil spreaders, and aid in maintaining the fluidity of the bearings. The thrust face is relieved at the parting line in order to prevent any sharp edges from projecting into the bearing area when the bearings are assembled. The flange itself is relieved at the parting line face to insure correct parting line measurement in the manufacture of the bearing and a tight fit at the parting line resulting in a bearing is assembled.

Some replacement flange bearings are supplied with excess stock on the thrust faces as well as on the I.D. These bearings are used particularly by shaft regrinders and engine rebuilders who wish to control end clearance after they have brought the shaft to size. Thus they can take advantage of economies offered by grinding all shaft thrust faces to the same dimensions.

HOW-TO-DO-IT TIP

Excerpt from Johnson Automotive Bearing Manual.

JOHNSON BEARINGS
Sleeve-Type



436. Power Tools

Thor Power Tool Company: A new series of twenty-four light-weight, air-operated reversible screw drivers and nut setters has been announced. They feature reversible motors to permit the tool's use for removing threaded fasteners as well as applying them, and for speeding inspection, testing, service and repair of all assembled products. The new Thor reversibles are available in four basic speeds, ranging from 475 rpm to 2000 rpm. Each is offered with either slip clutch or positive clutch. A further option of lever throttle or piston type throttle is offered for all types.

437. Torque Wrenches

Plomb Tool Company: Addition of six Proto torque-limiting wrenches that are calibrated in inch pounds has been announced. The new wrenches have capacities of 100 to 750 and 700 to 1600 inch pounds. Three models have a plain head and three have a built-in reversible ratchet head. Drive sizes are ⅜ inch and ½ inch. They release at the proper setting and reset themselves automatically. The wrenches have no dials, pointers or scales.



438. Dual Exhaust

Arnold Haviland Company: Sportsmen duals, new twin exhaust systems for Fords, Mercurys, and Chevrolets, have been

(Continued on page 100)

AVOID THIS



WITH THIS!

**ORDER FROM
YOUR JOBBER
NOW!**

E. EDELMANN & CO., CHICAGO, ILLINOIS U. S. A.



**GET YOUR
Edelmann 900-TV
FREEZ-D-TECTORS
TODAY!**

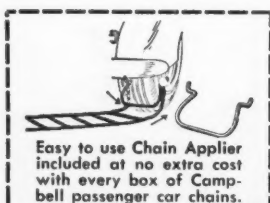


The "Man at the Bottom of the Hill" is Getting the Tire Chain Business

Few motorists think about buying chains until they're stuck. Then they buy from the handiest source—the "man at the bottom of the hill."

Sell your customers

CAMPBELL *Lug-Reinforced* CHAINS before it snows!



CAMPBELL offers this sure-fire program to make you the man at the bottom of the hill and the top of the sales heap:

Campbell's strong national advertising in *Saturday Evening Post* and *Collier's* helps pre-sell motorists on the longer wear and better traction of Campbell's patented Lug-Reinforced construction. National Safety Council Tests prove reinforced chains provide nearly 3 times greater stopping-ability and 4 to 7 times greater starting and climbing traction.

And Campbell's modern package, plus eye-catching banner, ad-mats, streamers, post cards and display ideas attract Campbell Chain sales to your station.

Write for 1953 Merchandising Kit and order your stock of Campbell Lug-Reinforced Tire Chains now!

CAMPBELL CHAIN *Company*

MAIN OFFICE: YORK, PA.

West Burlington, Iowa; Portland, Oregon; Sacramento, Calif.

Chain for every need...industrial...farm...marine...automotive



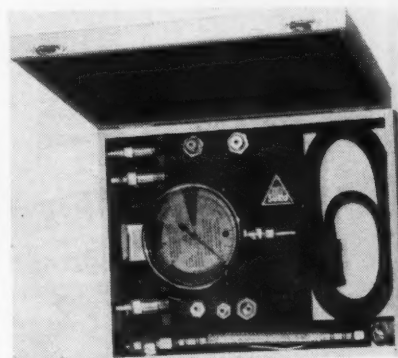
New Products . . .

Continued from Page 98

developed by the above company. Sweeping curves in the exhaust pipes have replaced the usual sharp bends, to minimize back pressure. The design is said to provide for the easiest possible installation on all applications, with ample clearance at all points. No alterations are required on the manifolds.

439. Three-Way Tester

Newage International, Inc.: TrioTester is the name of a new instrument for engine testing. It is designed to perform three important testing jobs: To test



vacuum; indicate dead center and ignition point; and indicate fuel pump suction and delivery pressure. All three tests are made on the same instrument and given on the same dial. The tester comes packed in a wooden case to provide protection for instrument and parts.

440. Baking Oven

Michigan Oven Company: An automotive refinishing baking oven, available for heating by gas, (Continued on page 107)



Jim Challis
Washington, D. C.
says . . .

IT'S YOUR BUSINESS

. . . or is it?

SEE PAGES 104-105

grind 'em **FAST...**

grind 'em **EASY...**

grind 'em **RIGHT!**

Snap-on^{*} *Blue-Point* Valve Seat Grinder

● Here's the **HANDY** one—designed exactly *right*—with short, stubby nose and sharply angled drive that lets you get at those seats close to the firewall without pulling the engine. The hex driving ball provides flexibility between grinder and stone carrier. Spring-mounted drive socket in stone carrier prevents over-pressure on the stone. Vertical vibrating action permits centrifugal force to throw out grindings—prevents stones from loading—reduces stone wear. Ask your Snap-on Man to demonstrate this grinder...try it!...you'll like its ruggedness, convenience and money-making performance. For new 104-page catalog "U," write Snap-on.



Valve Seat Grinder Set

Here's your complete set for grinding all valve seats. Handles hard or soft seats—so simple to use that any mechanic can easily turn out every job to factory standards. Set includes Blue-Point Angle Drive Motor, 2 Stone Carriers, Diamond Stone Dresser, 5 Pilots and Pilot Wrench, 10 Stones, all in compact steel case.

SNAP-ON TOOLS CORPORATION

8036-1 28th Avenue
KENOSHA, WISCONSIN

*Snap-on is the trademark of Snap-on Tools Corporation.



Thermo-Fan Continued from Page 54

proper hydraulic or pneumatic pressure is introduced through the hollow shaft into the cylinder, it reacts upon the piston, which in turn through the release collar forces the front pressure plate to depress the two springs, releasing the clutch.

The control valve, which operates the drive mechanism at predeter-

mined temperatures of the engine coolant, utilizes air at 72 psi or oil at 30 psi for operation. Air is used when the vehicle is equipped with an air compressor and air storage tank. Where the use of oil pressure from the engine's oil system is used to actuate the clutch, a larger size piston is used in the system to compensate for the lower pressure in-

volved. The thermal element of the control must be in contact with the engine coolant at all times and may be installed in the top tank of the radiator or other desirable place.

With the rise of the engine coolant temperature, the expanding thermostatic element in the control power unit, acting on the actuator post and piston stem, moves the valve piston toward its seat, a rubber seal ring. The length of the piston stem and the length of a pressure release set screw are so adjusted that at a predetermined temperature the piston contacts the seal ring shutting off the air or oil flow. Simultaneously the pressure release set screw opens the check valve to relieve the air or oil pressure in the clutch of the fan drive.

The piston is provided with a recess to allow it a free reciprocating movement on the stem, limited by an adjusting nut and actuated by the differential of two opposing forces acting on the piston, namely, the air or oil pressure and the piston spring pressure.

At the top temperature limit, when the piston and the pressure release set screw reach the seal ring and the check valve respectively, reducing pressure on the piston spring will urge the piston to move swiftly upward on the stem, into the rubber seal ring, shutting off the air or oil flow and relieving the pressure in the clutch.

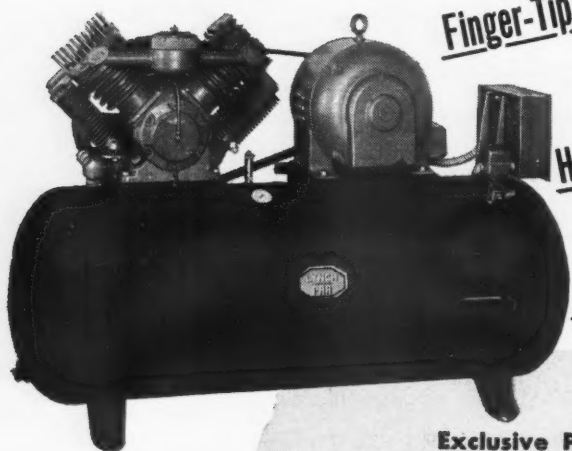
When cooling, the process is reversed. The return spring acting on the contracting thermostatic element through the actuator post, moves the piston out of the rubber seal ring. At the separating point at a predetermined pressure temperature, regulated by the setting of the adjusting nut, the inrushing air or oil forces the piston to move against the piston spring, away from the rubber seal ring, opening the piston valve fully for the air or oil flow to the clutch and simultaneously closing the check valve.

Control valves operated by oil pressure are provided with an oil return line connected to the exhaust port of the check valve.

Both the air and oil operated types of fan controls are made to fail safe, so that there is automatic fan engagement in case of a pressure loss.

Three Forward Steps

Exclusive in the NEW PAR 7½ H.P. and 10 H.P. UNIT



Finger-Tip Drain Valve Control

Horizontal Check Valve

Increment Starting

Exclusive PLUS Values

REDESIGNED HORIZONTAL CHECK VALVE provides positive insurance against leaks caused by dirt collecting around the seat. This exclusive PAR feature means smooth, trouble-free operation—reduced maintenance costs.

NEW POSITIVE TANK DRAIN VALVE, also exclusive with PAR, is operated with a finger-tip touch. A completely new-type screen and rubber seat keeps dirt out.

INCREMENT STARTING, standard on 10 H. P. model, cuts initial drag when the motor is started.

These new unique features—and others—make the PAR 7½ H.P. and 10 H.P. Model the best investment in air compressors. This tank-mounted, two-stage unit is built to operate smoothly for years, and to serve faithfully even under the most rugged operating conditions. Write for complete details.



PAR AIR COMPRESSORS



ICE CREAM SANDWICH WRAPPING MACHINES



WRAP-O-MATIC CANDY & COOKIE WRAPPING MACHINES



TOLEDO, OHIO . . . Branches—NEW YORK CHICAGO . . . SAN FRANCISCO . . . LOS ANGELES ATLANTA . . . DALLAS . . . TORONTO



MORPAC PAPER PACKAGING MACHINES



MORPAC BUTTER & OIL PACKAGING MACHINES



GLASS FORMING MACHINES

EXPORT DEPT. • 1902 Jefferson Avenue, Toledo 2, Ohio • Cables: BRADFOSA

New Westinghouse Campaign

SELLS YOU AS SAFETY CHECK HEADQUARTERS



In every town, your town, people will come to know this new SAFETY CHECK Emblem. They'll go to the dealer that displays it because they'll want Safety Check service.

The emblem pledges you to endeavor to check windshield wipers, battery, all lights, tires and brakes on every car left for service. Checks you now do as a courtesy. This new campaign sells you as Safety Check Headquarters. Tie-in and profit.

FREE Promotion Kit brings in business and identifies You as SAFETY CHECK Headquarters. It contains:



Auto Bulb Guide Chart



11" x 14" Counter Card



30" x 13" Transparent Streamer



Safety Pledge Certificate suitable for framing

**Plus—
Order Form
You Use To Get:**



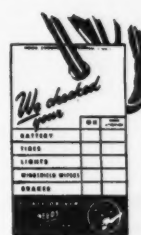
8" Safety Check Emblem (choice of Decal or Paper Sticker)



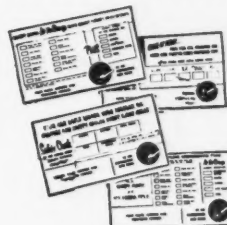
Newspaper Mats



Safety Check car door frame stickers



Snap-on Safety Check List Tags



Direct Mail Post Cards with or without dealer imprint

You will also obtain a Poncho in every display kit when you pay 60¢ for the kit. Made of durable plastic in a bright yellow, with the Safety Check Emblem on the back, it will last a long, long time.



...and Betty Furness on "Westinghouse STUDIO ONE", seen over 57 CBS-TV stations, will tell motorists to look for your Safety Check Emblem. ... also tune in Westinghouse Pro Football, starting October 3rd.



YOU CAN BE SURE...IF IT'S

Westinghouse

MAIL THIS COUPON TODAY FOR YOUR FREE DISPLAY KIT

Westinghouse Lamp Division, Dept. MA-9
Bloomfield, New Jersey
Without cost or obligation please send me the FREE Safety Check display kit.

NAME.....

ADDRESS.....

CITY.....ZONE.....STATE.....

☐ Please send Display Kits with Ponchos at 60¢ each.
Enclosed find ☐ check or ☐ money order to cover cost of kit with Ponchos.

IT'S YOUR BUSINESS

..... or is it?

Some years ago when we entered the automotive accessory field we had an idea that if the product was 'right' and car owners wanted it 'the world would beat a path to our door.'

Now, five years later, we've learned that we were both *right* and *wrong*!

. . . *right* because during this period we created a multi-million dollar industry for ourselves and others. *Right*, too, in that again this year KAR-RUG sales have increased . . . 45.8%

. . . *wrong* though, in believing that the world would 'beat a path to our door.'

The service station operators and car dealers who *have* stocked KAR-RUGS have sold them in increasing quantities . . . profiting from the steadily increasing demand by car owners. But many *others* have passed up the year 'round extra sales volume KAR-RUGS represent.

To those dealers who have not yet stocked KAR-RUGS, we'd like to say sincerely:

"If profit is your business —
IT'S YOUR BUSINESS to offer
your customers
RUBBERMAID KAR-RUGS!"

Rubbermaid®
KAR-RUGS



HERE'S WHY KAR-RUGS CONTINUE
TO BE AMERICA'S FASTEST SELLING
AUTO ACCESSORY

NEW COLORS

HOLIDAY HOLIDAY RED
COLORS HOLIDAY BLUE
HOLIDAY YELLOW
HOLIDAY GREEN

STANDARD COLORS

SILVER GREY FOREST GREEN
BURGUNDY RED ROYAL BLUE
DESERT TAN COCOA BROWN
MIDNIGHT BLACK

NEW LOW PRICES

No. 1452	16"x18"	\$1.69	\$1.39
No. 1454	18"x21"	2.49	1.79
No. 1455	15"x25"	2.49	1.79
No. 1459	18"x26"	2.69	2.19

UNLIMITED MARKET

Tear out this page as a reminder to
see your Jobber salesman.

Work out with him your Kar-Rug
stock of sizes and colors to meet
your customers' needs.

Why Sunoco dealers sell more gallons by 2 to 1

Large market area

We all know that the bigger a dealer's market, the greater his potential. Our dealer policy guards against overlapping. Sun dealers compete with other brands, not with each other.

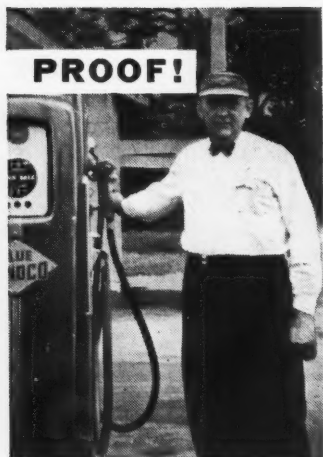
One grade—one price

Our continuing emphasis on "high-test at regular gas price" has led to a customer

loyalty that other gasolines cannot match. Once a motorist switches to Blue Sunoco, *he stays switched.*

Strong sales support

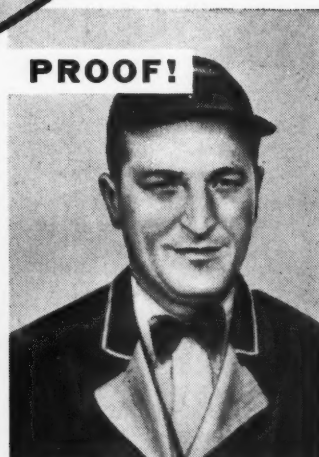
The company backs up the Sunoco dealer with millions of dollars worth of merchandising and advertising. Market experts keep him way ahead of competition.



"Switched to Blue Sunoco in my present location...doubled my gallonage first year and still climbing," says Ernest E. Boudreau of Spencer, Mass.



"Same location 15 years but switched to Blue Sunoco 3 years ago and doubled my gallonage," says Earl F. Hites of Shelbyville, Indiana.



"Within one month after switching to Blue Sunoco my gallonage increased 54%. Now it's doubled," says Ralph A. Grella of Fairfield, Conn.



Why not put yourself in this picture? There's *money* in it. Contact the local office of Sun Oil Company or write to Philadelphia 3, Pennsylvania.

New Products . . .

Continued from Page 100

electricity or steam, has been placed on the market by this company. The hot air is blown in through intake-outtake ducts, protruding from the ceiling of the oven. When sufficient temperature has been reached, cool air is released through the same ducts, thus helping to cool down the job. The electric ovens feature the use of ribbon heaters which are said to have the advantage of fast heat response and long life.



441. Ratchet Wrench

Tubing Appliance Company: An open and socket type ratchet wrench of special design is being billed as a "do-it-all" tool for work around engines. The "TAC" wrench fits over and around cables, wiring, tubing, etc., to tighten hex nuts and fittings. It is claimed to function perfectly with as little as 7 degrees ratcheting arc, so is suitable for working in tight, poorly accessible places. The head and sockets are centerless, permitting use on spark plugs, long studs, and other high standing center obstacles. It can be used with a torque handle for more exact specifications. Six sets are offered with a total of 64-snap-in sockets to cover a total range from $\frac{3}{8}$ in. in diameter to 4 in. in diameter. Crowfoot head and spanner head adaptations, both also featuring the open and ratcheting design—are offered.

Chilton's MOTOR AGE, SEPTEMBER, 1953

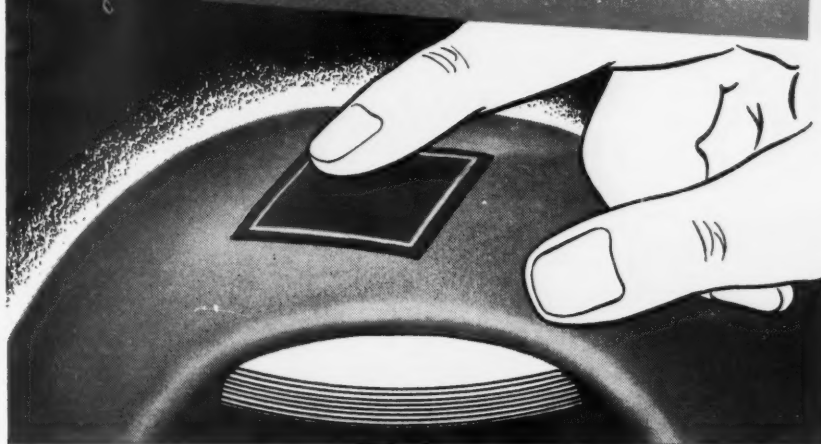
Quicker! Easier! MORE PROFIT!

when you repair tubes with

BOWES

**SEAL
FAST**

**PATENTED
Chemical Process
TUBE REPAIR METHOD**



Don't Let Anybody Kid You about vulcanizing being necessary for perfect tube repair

★ For more than 25 years Bowes "Seal Fast" Chemical Process (no vulcanizing necessary) has been recognized as the most dependable method of tube repair.

The Bowes chemical process is quick, easy . . . sure! No expensive equipment is necessary. So . . . save time, make friends . . . and more money on tube repairs with the Bowes "Seal Fast" Chemical Process method.

BOWES

**SEAL
FAST**

There is a BOWES Distributor in your immediate neighborhood who will be glad to demonstrate and PROVE to you, without obligation, that the Bowes Method is the best and the most profitable. Remember, there is no obligation. Just drop us a line today and the Bowes Man will be in touch with you in the early future.

BOWES "SEAL FAST" CORP., INDIANAPOLIS 7, INDIANA

Customers Do the Work .Cont'd from Page 56

class shape again. Moreover, he reasoned, many a driver today is pretty handy with a few tools, and had they the proper space, with added equipment and helpful instruction at a cost within their budget, they'd do the work themselves. However, he left no stone unturned in checking into angles which offered promise.

In addition, through discussions with owners of sports cars, hot rods, stock cars and even motorcycles, he made certain that there was a crying need for a place where *these* folks could take their "pride 'n' joy" and tinker to their heart's content.

He discovered a spot which had been a combination service station

and body shop on the extreme fringe of the city limits, and proceeded to tie it up on a long-term lease. Some equipment he moved from his Oakland Avenue station, although he immediately purchased a valve facing machine; a portable crane; an engine test machine; in addition to a wheel balancer and a portable welding machine. Adding a complete set of all types of wrenches, screwdrivers and gadgets of all sorts, he discovered he had an actual tool and equipment investment of close to \$4,000.

His Oakland Avenue spot was tied in with an oil company and he secured their cooperation at the Appleton Avenue location, winding up with tanks, pumps, fuel and a small assortment of stock. Early in October of '52, Aiken proclaimed to this area, the fact that he had 12 large stalls equipped with floor jacks, stands and movable work bench with vise and tray for washing parts.

His ads further stated that patrons would also find available complete sets of tools for doing any type of work on a car, truck or motorcycle. Also, to be found at your service, were chains and hoists; complete machine shop for engine rebuilding; steam cleaner for chassis and engines; clutch, brake and welding equipment; parts of all kinds for any make of car; the technical manuals for any type of car, plus experienced supervision by skilled mechanics.

For all of this, the patron pays \$1 per day for stall rental, plus 75¢ per hour for the use of equipment and tools. The help and instruction for those who desire it, was all in the bargain.

Aside from his ads appearing in both local newspapers, Aiken drew on his mail order list some 7000 satisfied customers serviced at the Oakland Avenue place down through the years. "Word-of-mouth" added to the momentum, and before the week was over, stall space at the new "Fix It Yourself" garage was already at a premium. As a matter of fact, now that the "infant" is two months old, it is a standing procedure to phone, before driving out, in order to make certain there is room available.

(Continued on page 112)

*You're always right
with this Mike!*

READ-RITE

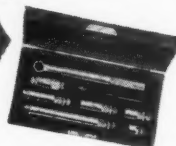
This patented feature available on all Central Micrometers up to 6"

With the READ-RITE there's no need for the computations usually required in determining a micrometer reading — you see the measurement **at a glance!** Numbers which automatically appear in the "windows" on the thimble as the micrometer is adjusted to the work, eliminate the possibility of the common error of .025" due to reading the wrong graduation on the barrel. Ask your jobber or send coupon for catalog.



Set No. 45 Outside Micrometers. Range: 0" to 4". Four micrometers, complete with Ratchet Stops, Lock Nuts and Standard Test Gauges in DeLuxe Plush-Lined Case.

Set No. 80 Inside Micrometer. Range: 1 1/2" to 8". Complete with Extension Handle in DeLuxe Plush-Lined Case.



THE CENTRAL TOOL COMPANY 462 Wellington Ave., Cranston 10, R. I. Please send me your complete catalog.	
Name	
Company	
Street	
City	State

"We've 'upped' all our
TBA business with Schrader
Certified Air Service"



This is what Nathaniel H. Walton, owner-operator of Walton's Service Station, Center Ave. and Eighth St., Moorhead, Minn. says:

"It's the same idea as showing the oil dipstick. We show the actual gauge reading of a tire to our customers, explain how our Certified Air Service helps them save tires and money, makes a car ride and steer easier. This way we turn 'hoppers' into 'steadies'."

Increase your business with good Air Service. Certify your Air Service by using the 8106B Trutest Special to check all gauging equipment weekly. Use and sell finest quality Schrader Products, and you will notice the difference in your customers' interest in all your services. Order the Replacement Valves, Valve Caps and Cores, Gauges and Airline Parts you need today!

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

7750T Handy pencil-type Tire Gauge for—"dipstick approach".



5050 easy-to-read, accurate glove compartment Tire Gauges. Sell 'em to smart motorists.



Complete sets of 5 Replacement Cores and Caps. Display and sell them to motorists for the best protection of air in tires.

Schrader

REG. U. S. PAT. OFF

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

Why Pedrick

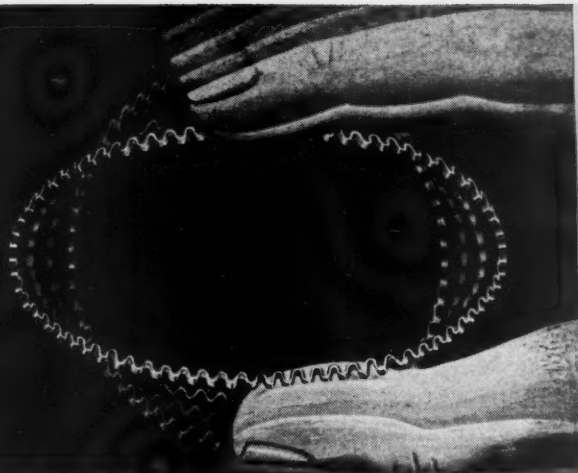
FORMFLEX Chrome

Piston Ring Sets are

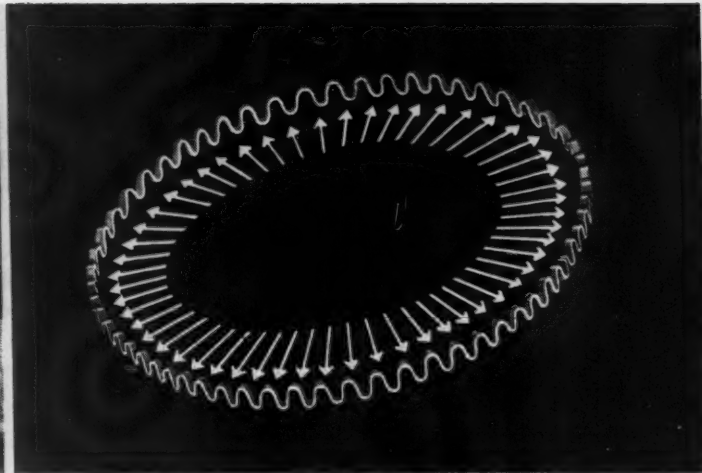
"Unbelievably Better"



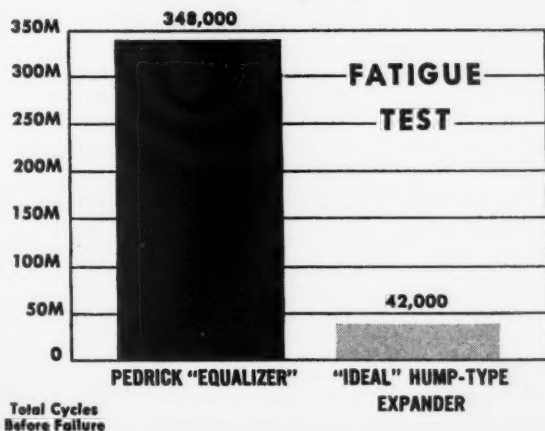
They make
every mechanic
a "RINGMASTER"



Look first at the Pedrick "Equalizer" ... the most outstanding development in expander design, operation, performance and life. Note how the "Equalizer" can conform to any cylinder condition of taper or out-of-roundness—contacting the ring rails all the way around, not just at 7 or 8 humps.



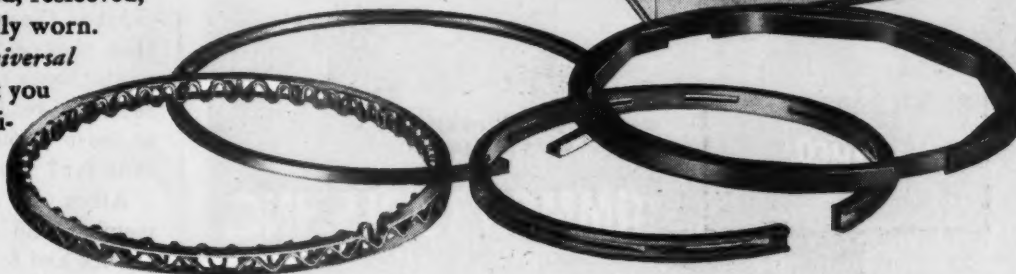
Because of the "Equalizer," Pedrick FORMFLEX delivers the softest, most uniform and positive tension at every point around the cylinder wall—assuring a perfect seal, greater oil drainage and far longer life.



As For Endurance—An engineering test shows that a Pedrick FORMFLEX "Equalizer" can be deflected continuously through a .060" change in diameter 15.8 times more often than any hump type expander before metal fatigue occurs.

Getting the *right* Engineered Set for any job is now simple as ABC. Get a Pedrick FORMFLEX Chrome Piston Ring Set. It is guaranteed to outperform and outlast any other set in *any* engine—whether new, rebored, resleeved, slightly worn or badly worn. It's the first really *universal* "package"—one that you can install with confidence and profit!

There's a
"NEW ENGINE"
in every box



WILKENING MANUFACTURING CO., PHILADELPHIA 42, PA.

In Canada: Wilkening Manufacturing Co. (Canada) Ltd., Toronto

Customers Do the Work .Cont'd from Page 108

Here is how his system operates. A young lad drives up and explains his difficulties; says he had a quotation of about \$35. Aiken, Art Koscinski, his manager, or Ralph Muccilli, assistant manager, who ever happens to be at liberty for the moment, will check and offer a few suggestions. In this case, the youth wound up with new brake

linings, drums turned and a brake adjustment. He decided at the last moment to get a winter tune up, and his entire bill amounted to but \$15!

The idea has certainly caught on. Such famous personalities as Brooks Stevens, the Rosenberger boys and scores of race drivers take advantages of the service. And for

the lads who yearn for a Hot Rod that'll "knock your eyes out," the fixit yourself gimmick is a godsend. They are usually hard pressed for ready cash, and to cough up to the average garage about a thousand bucks is out of the question—for sure.

An excellent illustration in this respect, is the Jim Wild job.

Jim, working at a motor parts store, has had a yen for a hot rod for years, but lacked the ready funds to undertake the project. Learning of the Aiken establishment, he went out, looked the place over and discussed his plans with the Aiken mechanics. As usual, when everything was said and done, Jim was convinced. His first step was to pick up an old jalopy, which he finally managed to pay for—delivered to Aiken's garage, for \$25.

Together with a friend, the boys proceeded to tear the junker apart. A "Chev" body, frame and motor purchased at random lots, enabled the lads to get down to business. They took off the mechanical brakes, and replaced them with hydraulics; added a '37 Olds transmission to get a far better gear ratio; channeled the body; welded the door, giving them only one door, though adding to a smoother looking job; took a "Chev" truck flywheel, and ground off 14 pounds; added a Rockfor racing clutch in an effort to secure a more rugged grip; changed to Ford dual carburetion for additional power; and rounded out the project with dual exhausts; improved brackets; pop-out safety windshield in a crash-proof dash and other minor readjustments. Another month's work and the car will be ready for road or race track. But the important point to these teenagers, is the fact that they did 95 per cent of the work themselves. Aiken admits the car when ready would easily sell for at least \$2,500! Cost to the boys thus far? About \$400?

Aiken is an authorized AAA member and naturally offers road service and towing facilities, which add to his gross income. As an economy measure, he uses a few college students on these jobs, particularly since they are available at any time of the entire night.



**AMMCO
SAFE-ARC
BRAKE SHOE GRINDER**

Model 2000

Grinds lining to fit arc of drum
Handles all shoes for drums 9" to 16 3/4" in diameter
Produces precision arc on 8 shoes in 4 minutes
Abrasive sleeve is quickly replaceable
Built-in vacuum system prevents flying dust
Eliminates "wear in" periods and free adjustments



PLAY SAFE WITH AMMCO
— THE BIG BOY!

AMMCO TOOLS, INC.

2162 COMMONWEALTH AVENUE • NORTH CHICAGO, ILLINOIS

See 'em sell...sell...sell!

PUROLATOR'S HELPING dealers put a clean Purolator Filter into every car. NOW ON—thru fall and early winter.



HELPING with magazine advertisements in Saturday Evening Post, Life, Look, Popular Mechanics, Popular Science and a list of farm publications . . . Selling motorists on Purolator BEFORE THEY BUY.



HELPING with powerful eye-catching displays . . . streamers—posters in Day-Glo . . . plus a brand new idea in counter-window displays (with space for special imprint) . . . Selling motorists where they buy—when they stop for gas, oil, service.

HELPING with trained merchandising representatives . . . ready, willing and able to advise on stock and display—how to sell more, increase profits.

HELPING with Purolator's handsome 16-page book that shows all—tells all about filters . . . what to say . . . how to say it.



REMEMBER: 100% of the market is Purolator's—100%. 1. Most makes of cars are factory-equipped with Purolator Micronic* Oil Filters. 2. All cars filter-equipped take Purolator* Refills. 3. Tests prove Purolators are built better, do a better job—filter more dirt, finer dirt, faster—leave in valuable H-D additives.

Need more information? Check with your supplier . . . or write direct.

PurOlator

World's finest **OIL FILTER**



PUROLATOR PRODUCTS, INC., Rahway, New Jersey and Toronto, Ontario, Canada

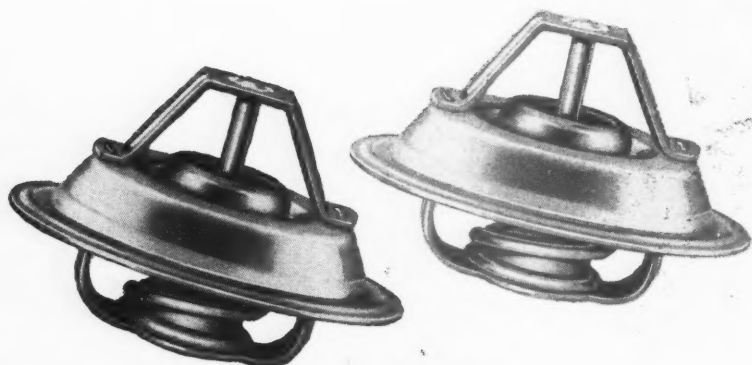
Chilton's MOTOR AGE, SEPTEMBER, 1953

*Reg. U. S. Pat. Off.

GM Rolls Up Its Sleeves .Cont'd from Page 42

GM attacked the problem in three broad areas: First was a gigantic salvage operation to recover and inspect the approximately 3000 machines from the wrecked plant. Within ten days all machines were removed, with about 560, or 19 per cent, found damaged beyond repair. Those in usable condition were shipped to

the Kaiser plant at Willow Run, where General Motors has leased 1.5 million sq ft of floor space, or to other GM units. Machines too badly damaged for easy repair or immediate use have been shipped to approximately 170 different rebuilding companies in 51 cities. A large part of the damage was to electric motors, and about 25,000



A new and revolutionary High-Pressure Stat embodying the efficient and reliable Poppet Valve

● The high-pressure thermostat is an essential for installation on certain late model cars and trucks employing highly-pressurized cooling systems.

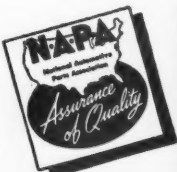
The Thomson H-P Thermostat for the first time brings to these vehicles and their owners the benefits afforded by the efficient and reliable poppet valve — *never before available in thermostats of this type.*

The thermal actuating unit of the Thomson H-P stat is not a bellows, but a capsule containing a gelatinous mineral which expands with tremendous force when subjected to heat. This expansion forces open the poppet valve, which is held closed by a spring until operating temperatures are reached.

STANDARD-THOMSON CORPORATION • DAYTON, OHIO

Order your thermostat and gasket assortments in now from your NAPA Jobber

... Be ready with the most complete and salable line in the thermostat business;



motors of all sizes have been shipped to Delco for rebuilding.

Simultaneously, GM got under way a gigantic subcontracting program which farms out practically all Hydra-Matic components to GM divisions and outside suppliers. Tooling and engineering personnel throughout the corporation were called in to determine which components the various divisions could undertake to supply. Objective of the subcontracting project is to get parts flowing in at an early date so Hydra-Matics can again be built while GM re-establishes its own tooling which will be housed in the Willow Run plant until a new factory can be built at Livonia.

Third step was a decision to use Dynaflo transmissions from Buick on Olds and Cadillac and Chevrolet Powerglide on Pontiac. Engineers worked day and night to make the necessary adaptations, so that installations could start early in September. Pontiac was more fortunate than the others in this respect, since Powerglide has been used on Pontiacs in Canadian production. However, many alterations still are required, such as thicker radiator core, different prop shaft, changes in the quadrant and rear throttle rod, location of the oil cooler, etc.

Nothing improves your driving like having a police car follow you.

Cadillac and Olds have had to make extensive changes in such items as frames, flywheels, bell housings, rear of the cylinder block, crankshaft, prop shaft, rear housing extension, etc.

Meanwhile, Pontiac and Olds managed to keep operating on a reduced scale by increasing installation of manually shifted transmissions. However, with H-M normally accounting for about 85 per cent on Pontiac and 98 per cent on Olds, it was difficult to get enough manual shifts and also posed the danger of loading dealers with more "straight stick" jobs than the public would buy in the present market.

(Continued on page 116)

Chilton's MOTOR AGE, SEPTEMBER, 1953

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The right choice

for every shop that services Plymouth, Dodge, De Soto, Chrysler, Dodge "Job-Rated" Trucks

The MOPAR sign

means genuine Chrysler Corporation parts and accessories

CHRYSLER CORPORATION
PARTS DIVISION
DETROIT 31, MICHIGAN

Display the MoPar sign and tell customers you use the *right* parts for every Chrysler Corporation car and truck. Show the sign that stands for *quality* . . . that inspires customer confidence . . . that brings in business! MoPar parts are always your best choice because they're made to exactly the same high standards as original parts. They're certain to be *right*—to fit right—to work right. Sell satisfaction. Recommend and install MoPar parts and accessories!

PERFECT WHEEL WEIGHTS FIT & STAY PUT

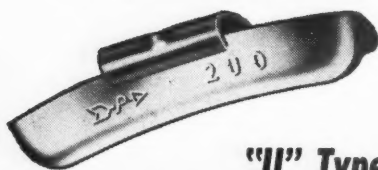


The Double 3-Point Suspension does it!

PERFECT Wheel Weights are made with a larger radius than the rim, so that when applied they create constant pressure at points 1-2 and 3 (shown above in top photo). Bearing points to prevent "rocking" are also formed at points 1a-2a and 3a (shown in small illustration).

Such a DOUBLE 3 point suspension principle prevents slipping—"rocking" and loss of weights. PERFECT'S "stay put"—they give SATISFACTION. That's why they're the world's largest selling wheel weights.

This principle applies to both the "C" and "U" type Perfect Weights.



"U" Type

Fits all passenger cars made before 1949 which had either E or F type rims. Still gives satisfaction on most cars manufactured up to present time. Made in the following sizes: 1/2- 1- 1 1/2- 2- 2 1/2- 3- 3 1/2- 4- 4 1/2- 5- 5 1/2- 6-ounce.



"Special" Type

Made for all late model Cadillacs equipped with large chrome hub caps covering the entire wheel. Made in the following sizes: 1/2- 1- 1 1/2- 2- 2 1/2- 3-ounce.



PERFECT EQUIPMENT CORP.

804 W. Morgan St.

KOKOMO, IND.

P. O. Box 706



Manufacturers of Passenger and Truck Wheel Weights — Coil Spacer Rings — Caster Shims.

GM Rolls Up Its Sleeves . . .

Continued from Page 114

It now appears that the fire was much more costly than originally estimated. The expense of round-the-clock salvage operations, cost of rebuilding tools, the staggering expense of farming out manufacture of Hydra-Matic components and actual loss of the building are now expected to be more than \$70 million exclusive of losses from interrupted business.

How soon GM will be back into production of Hydra-Matic is uncertain. Certainly it will not be more than 60 days before at least some output is started, and it probably will be a lot sooner than that. Plans now call for using the Willow Run plant for both manufacturing and assembly until a new plant can be built at Livonia.

Customer: "How much will it cost to have my car completely refinished?"
Body Shop Operator: "Usually it would cost you one hundred and fifty dollars, but I'm not going to charge you that. How about a hundred and forty dollars?"

Customer: "No."

Operator: "Hundred and thirty dollars?"

Customer: "No. And I won't give you a hundred and ten dollars, or ninety-five dollars. I'll give you seventy-five dollars and not a cent more."

Operator: "Sold. That's the kind of a deal I like. No chiseling."

Four other makes also are affected by the Hydra-Matic plant fire. Nash and Kaiser, however, were out of production and felt little effect at first. In fact, part of the Nash shutdown was due to an oversupply of Hydra-Matic equipped cars in the field, and it probably can weather out the model year with stocks of Hydra-Matics on hand. Kaiser still is out of production.

Hudson, which also uses Hydra-Matic, was uncertain about what it would do for automatic drives. The company is reported to be negotiating for another make unit, but declined to confirm the report.

Lincoln immediately went on a reduced schedule to stretch out its inventory of Hydra-Matics for at least another month. However, the company is working on adapting the Merc-O-Matic transmission.

Gatke

BRAKE LINING

For the man who wants the best



A-T 42 for POWERFUL BRAKES

POWER that stays HIGH for added SAFETY and real STOPPING COMFORT. Specially adapted for cars with automatic transmissions.

To make stopping a pleasure you can recommend A-T .42 with assurance. There's nothing like it.

ask your GATKE Jobber or write

GATKE CORPORATION, 244 N. La Salle St., Chicago 1, Ill.

Manufacturers of

ASBESTOS BRAKE LINING FOR EVERY PURPOSE . . .

MOULDED ASBESTOS FRICTIONS—ALL SHAPES AND SIZES . . .

MOULDED FABRIC BEARINGS SERVING ALL INDUSTRIES . . . ASBESTOS TEXTILES

Wisconsin Insurance Co. Opens Body Repair Shop

The Rural Mutual Casualty Insurance Co., an affiliate of the Wisconsin Farm Bureau, announced that it was going into the automobile repair business because it was concerned over the rising costs for repair work and resulting claims. The Madison firm hopes that it can hold down repair

costs and give its claim adjusters a better idea of what it costs to fix damaged cars. It will have a staff of six men.

Lewis F. Roherty, Madison, director of Farm Bureau insurance companies, said most of the work done at the shop will be connected with settlement of claims against the company, but non-member business will be solicited. He

added that the shop did not anticipate reducing the standard costs per hour charged by private shops. The shop will be self-sustaining and should help to hold down repair costs and hereby keep premiums as low as possible.

The Farm Bureau Mutual Automobile Insurance Co., Columbus, Ohio, operates a similar shop.

One name that means
EVERYTHING for safe lubrication

SOUND YOUR 2
100% Pure Pennsylvania
PENNZOIL
Safe Lubrication

Hydraflo
AUTOMATIC TRANSMISSION
FLUID TYPE A
SAFETY LUBRICATION
A PENNZOIL PRODUCT

PENNZOIL
SCL GEAR
LUBRICANTS

PENNZOIL
OUTBOARD
MOTOR OIL

PENNZOIL
The Triple Filter
MOTOR OIL
SAFETY LUBRICATION
MADE PURE PENNSYLVANIA

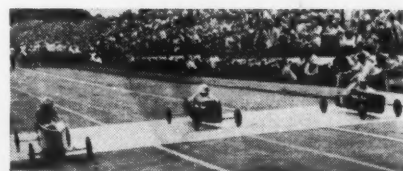
EVERY PROFIT OPPORTUNITY YOURS WITH PENNZOIL

Cash in on Pennzoil *quality* by selling the full line of Pennzoil products. Coast-to-coast acceptance of Pennzoil motor oil—the nation's fastest-selling premium oil—gives you a ready market for *all* Pennzoil lubricants.

You'll stock fewer brands, because you can meet *any* lubrication need with a Pennzoil product. You'll have less money tied up in inventory, because Pennzoil products sell *fast*. And you'll realize more *profit* through proved Pennzoil merchandising programs that develop more customers and keep them coming back.

Get the facts *now!* Contact your nearest Pennzoil distributor or write us for his name.

THE PENNZOIL COMPANY OIL CITY, PENNSYLVANIA



'53 Soap Box Derby Winner

Freddy Mohler (left), 14, of Muncie, Ind., crosses the finish line ahead of brother Dale and John King, of Los Angeles, to win the All-American Soap Box Derby at Akron, Ohio. Dale, at right, finished second.

GM Division Releases Film On Brake Check, Repairs

"Take it Off" is the provocative title of a new technicolor motion picture being released by United Motors Service Division of General Motors.

The film, however, does not tell the life story of Gypsy Rose Lee and will have no trouble from the censors. The title refers to automobile wheels.

The scene is laid in a typical garage and is complete with a pretty girl and love interest but it tells the story and points up the importance of watching and checking customer's brakes, brake fluid and brake cylinders.

The film will be shown to United Motors distributors and the personnel of their accounts.

Pan-American Road Race Scheduled for November

The fourth annual Pan-American Road Race through Mexico is scheduled for November, 1953. The same 1,933 mile course is planned from the southern border of Mexico to Juarez, across the line from El Paso, Texas. Four separate categories of entries will be established this year instead of the two in last year's race. Prize money is estimated to be about \$100,000.



Looking uphill at Derby Downs, grandstands are filled with capacity crowd of 60,000.

Freddy Mohler receives his award for becoming the 1953 All-American Soap Box Derby champion. The trophy is presented by W. E. Fish, general sales manager, Chevrolet Motor Division. A \$5,000 college scholarship goes with it.



Freddy Mohler of Muncie, Ind., crosses the finish line in the championship heat to provide a thrilling climax to the 1953 All-American Soap Box Derby.



As Thousands Cheer . . .

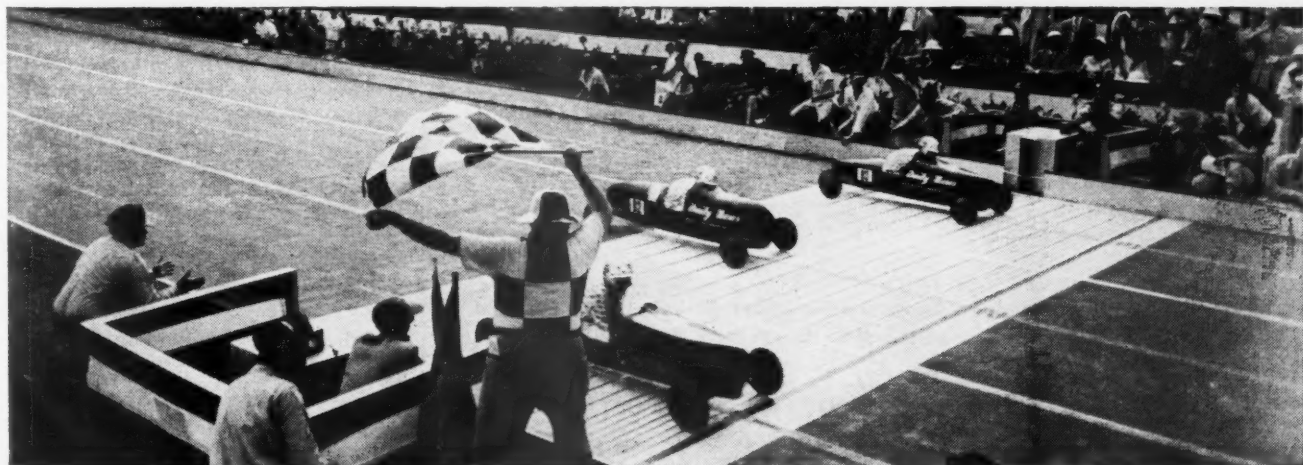
16th All-American Soap Box Derby thrills huge crowd!

Chevrolet Dealers and Co-Sponsors Again Bring Great Nationwide Program to American Boys



Another Soap Box Derby season ended in a blaze of glory on August 9, when the spectacular All-American Soap Box Derby at Akron, Ohio, led to the crowning of a new national champion. Sixty thousand spectators hailed the victor.

The wholehearted cooperation of more than 150 leading newspapers, Chevrolet dealers, civic organizations, community groups and hundreds of individuals is gratefully acknowledged. Their untiring efforts have made the Soap Box Derby "the greatest amateur racing event in the world." More than that, it has become a national institution demonstrating the great American way of working together toward a common objective. Chevrolet Division of General Motors, Detroit 2, Michigan.



Snyder Lynch Continued from Page 60

Special containers are used to carry the substantial amounts of greases.

The truck carries its portable service equipment safely in the middle beneath white metal shelving for tools, parts and accessories. It has two 30 gallon tanks for motor oil and water near the door. Coming out of the back step is an open drainage pipe leading to a divided, 50 gallon drum for waste

oil and water, underneath the floor. Outside, across the top of the truck doors, are stationary flood lights to accommodate round-the-clock servicing.

"Our advertised lube rack on wheels is valued at \$10,000," Mr. Snyder says. "It handles fleet accounts in sizes of 20, 30 to 40 units, anywhere within a 50 mile radius, day or night. At this moment, its

on-the-job service adds about \$1,200 a month to our gross lubrication profits—with \$60 a day in labor sales.

Mostly through accounts already in the dealership through new truck sales, the mobile lubrication unit has got started on its own build-up. Attention and news of its operation in any one trucker's yard promptly adds neighboring outfits to its specially, grouped, customer list. Service on their trucks—at the best possible time—when they are not earning money—is not confined to large outfits, but the mobile unit only operates in districts where a number of truckers grouped together will create enough business.

The Snyder-Lynch mobile lubrication truck handles approximately 80 truck maintenance accounts in the Burbank district. Thinking his idea has not reached 25 per cent of its selling potential yet, Jack Snyder is presently applying direct-mail to some 3000 general truckers and fleet-owners in the surrounding network of cities, including Los Angeles.

**There's All the Difference in the World
in Grease Fittings!**

UNIVERSAL

**Quick-Release Shoulder prevents
break-offs, distortion and twist-outs**

Universal's patented release shoulder unlock's coupler jaws quickly and easily, prevents jaws from sliding down on neck of fitting. Release groove, under the shoulder permits nose of coupler to clear the fitting without binding — saves time and the nuisance of replacing damaged fittings.

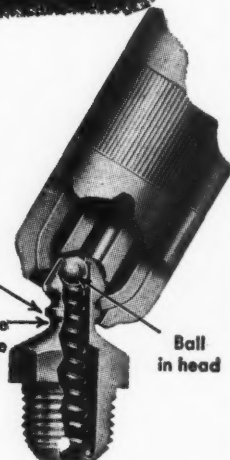


Complete line of lubrication accessories. Write today for new catalog.

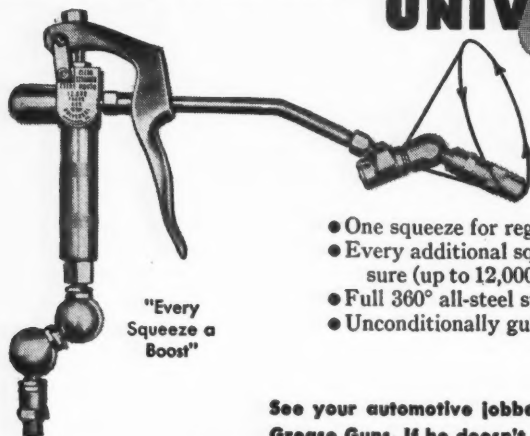
Quick
Release
Shoulder

Release
Groove

Ball
in head



UNIVERSAL



**12,000 pound
Grease Gun**

- One squeeze for regular greasing
- Every additional squeeze builds up more pressure (up to 12,000 pounds) for stubborn jobs.
- Full 360° all-steel swivel coupler
- Unconditionally guaranteed for 1 year

"Every
Squeeze a
Boost"

See your automotive jobber for Universal Fittings and Grease Guns. If he doesn't stock them, write direct.

U

UNIVERSAL LUBRICATING SYSTEMS, INC.

797 ALLEGHENY AVE., OAKMONT, PA.

Shortly before the invasion, a general and his staff were watching a troop carrier and glider go by. A carrier pigeon was seen being released, and powerful field glasses followed the bird to a field nearby. The colonel raced over and took the message from the bird's leg and raced back to the general who read it, let out a string of cuss words and threw it on the ground. The colonel waited a few minutes, then picked up the message. It read: "I have been sent down for being naughty in my cage."

The automotive service center of Snyder-Lynch, headed by George Clark, is tying most of the commercial transport up to a mobile lubrication unit contract.

This agreement entitles them to a regular fleet discount on all their batteries, tires, accessories, bulk oil, grease, and so forth: plus the progressive, economic advantage of on-the-spot, scheduled maintenance for each one of their trucks. Fleet owners using the Snyder-Lynch lube truck get a \$2 lubrication on any of their twin-axled units.

BOWER

ROLLER BEARINGS

*Precision made
for rugged service*

BOWER tapered roller bearings are Spher-O-Honed . . . honed raceways, with contours matching the roll ends for better load distribution and quieter operation. Bower's higher flange means a bigger oil groove, *positive* lubrication. Install Bower, and you install dependability!

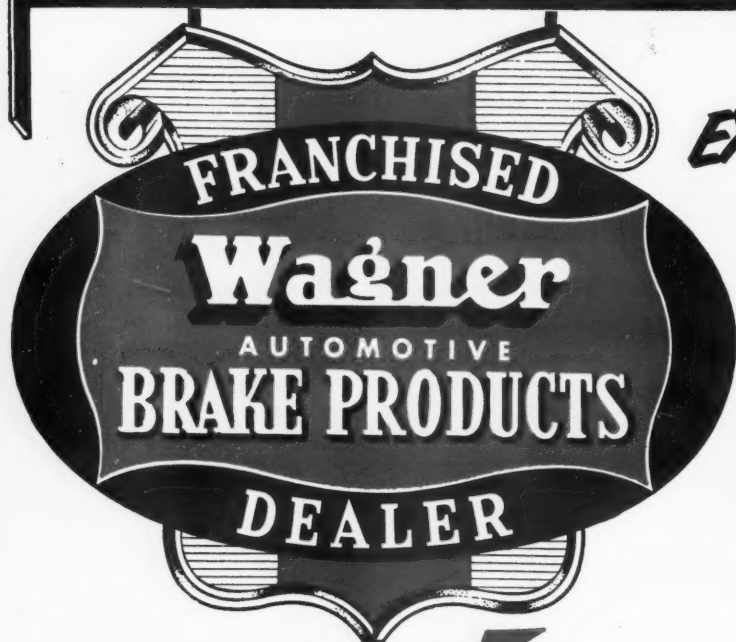
*Ask Your
Federal-Mogul Jobber*

FEDERAL-MOGUL SERVICE

(Division of Federal-Mogul Corporation)

DETROIT 13, MICHIGAN





*IT'S
EXCLUSIVE WITH WAGNER
IT'S A
MONEY MAKER for you
you have
EVERYTHING TO GAIN
-NOTHING TO LOSE*

THIS SIGN IS YOUR IDENTIFICATION



JOIN
**this money-making
FRANCHISED
DEALER PROGRAM
NOW...**

ask your jobber or write us for complete information . . . do it today!

A53-6

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRoL • CoMaX BRAKE LINING • AIR BRAKES

why *YOU* should be a Wagner Franchised Dealer

1. Increase your business—Motorists will readily take their cars to the Wagner Franchised Dealer shop for brake repairs. They recognize the importance of having their work done by a qualified shop.
2. Wagner Brake Products are used as original equipment by vehicle manufacturers. Turn out better brake jobs—High quality and exact fit helps you turn out good work.
3. Cash in on extra profit on brake work—you enjoy greater profits through special buying arrangements when you qualify as a Franchised Dealer.
4. Reduce your stocking problems—you always have what you want when you need it. Your jobber keeps your stock up to the minute.
5. Maintain better coverage—your stock is balanced for your volume of business and for the demand in your neighborhood.
6. Keep up to date with good maintenance and catalog information—the best in the industry.
7. Simplify your buying—get all your brake service parts, fluid and lining from one source—your Wagner jobber.
8. Make your advertising bring better results with this advertising material—banners, streamers, post cards, newspaper mats, stickers—everything needed to help you tie in your local advertising with Wagner's national campaign.
9. Be recognized as a Wagner Franchised Dealer. Wagner furnishes metal signs, decals, streamers—everything to identify you as a Wagner Franchised Dealer.
10. Cash in on national advertising in the Saturday Evening Post and Collier's. This advertising is directed to the car owner and appears on regular schedule.

Wagner Electric Corporation
6498 Plymouth Ave., St. Louis 14, Mo.
(Branches in principal cities in U. S. and in Canada)



Wagner®

...the best known name in brake service

TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL CRANE BRIDGE BRAKES

their notches easily. Leave the tools in the springs until replacing the hood and reverse the above procedure to replace them. I made these for 1942-48 Chevrolets but they can be made to fit almost any type hood spring. *Kenneth Bowland, Triangle Service, 1597 Williams Lake Road, Route #2, Pontiac, Michigan.*

Wick-Type Rear Oil Seals Installed With Choke Cable

Here is my "Shop Kink" for installing wick-type rear oil seals.

First take a choke cable, run it behind the seal and lock the cable behind the upper seal. Pull and turn the fly wheel at the same time. Now your seal is out.

To install the upper seal, get a discarded lower cap from the same type car you're working on. Cut one-third of the cap off and taper the wick groove with a file; then install it in place of the lower cap. Push the choke cable in the upper groove and through one-third of the lower cap which was cut off. Hook the cable in the seal. Next, pull the cable and turn the crankshaft in the same way as you are pulling on the cable. The seal will work in easily. *Frank H. Stein, Appleton, Wis.*

NEAPCO ALL PURPOSE Drive Shaft Assembly



Standard rectangular telescoping center assembly.

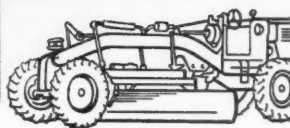
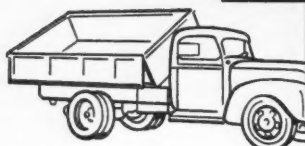
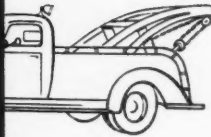
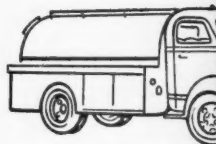
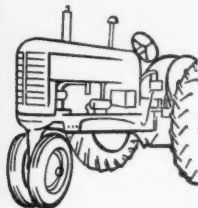
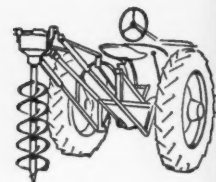
Quick-disconnect type end yoke.

Neapco PTO Joints are made with solid forged steel yokes. Center assemblies use hardened steel plain bushings or needle roller bearings for long service.

All purpose rectangular drive shaft illustrated for most light duty farm applications. Other types of shafts and joints to fit trucks, graders, winches, etc.

Free Catalog PT-15B. Describes, illustrates, tabulates complete Neapco line of PTO Joints. Write today.

Dept. 11, NEAPCO PRODUCTS, INC.
Pottstown, Pa.



by the makers of the famous Neapco Universal Joints

Tin Prevents Damage to Felt Seal When Installing Oil Pan

When replacing the oil pan on Chrysler engines, I find that the felt seal on the plate in the front of the flywheel interferes with the oil pan unless that plate is removed.

I use a piece of light tin from the side of an anti-freeze can, cut to fit in front of the felt, allowing the pan end to slide in place. The tin shield is easy to remove after the pan is bolted in place, leaving the felt undamaged. *L. F. Scott, Evans Motors, Meadow Lake, Saskatchewan, Canada.*

Preventing Horn Ring Rattle On Late Model Chevrolets

I have discovered an easy and permanent way to stop horn ring rattles on late model Chevrolets. It is almost impossible to tighten the three screws holding the horn ring to the wheel—getting them tight enough to stop rattle and vibration on rough streets will cause the horn to start blowing itself when hitting a hard bump or making a turn. My remedy for this is to tighten the screws just enough to take out excess play and then press a strip of caulking compound around the plastic ring that holds this screw, filling the gap between the ring and the steering wheel. This gives enough flexibility to blow the horn but still keeps the horn from sliding around and vibrating. *B. J. Murski, Chevrolet-Keystone Co., New Castle, Pa.*

"Going to be tough sledding today."
"How come?"
"No snow."



*When Customers Come In
for An Engine Oil Change,
always say—*

**"And I'll Change
Your Element, Too"**

7 out of 10 will say YES!



**Install
the One That Protects
More New Car Engines
Than Any Other Brand**

Service Suggestions . . . Continued from Page 61

protect the passages from chips. (4) Using a 1/4-inch USS tap, tap threads in the 3/16-inch bleed hole for a depth not to exceed 3/16-inch or about four full threads. (5) Thread a 1/4 USS screw into the threaded opening until it is securely tightened into place. (6) Saw the extending end of the screw off near the filter pad, using care not to scratch or mar the

filter pad. (7) Using a sharp center punch, stake the screw in three places to prevent it coming out of position. (8) Mark the center of the plug and drill a 1/32-inch hole through the plug until the drill passes through the plug into the bleed valve recess. (9) After drilling and staking plug, remove any burrs or rough surfaces from the filter mounting pad. (10) Clean

the filter thoroughly to remove any chips present, install bleed valve, spring and plug. Install the filter on engine. Use new seals between the engine block and filter pad.

Procedure Used on Pontiac Insures Proper Door Lock

If, on a Pontiac, door, with the locking rod knob in the locking position, can be opened to the "safety" position by actuating the outside push button, it is due to the interference of the door lock intermittent lever with the hook lever. The following procedure can be used to eliminate the interference to insure proper operation of the door lock.

1. Lower the door glass.
2. Remove locking rod knob and garnish molding or finish panel.
3. Check the accessibility of the door lock intermittent lever through the opening between the door inner and outer panels. If access to the intermittent lever is available in this location, proceed with Step 5.
4. If access to the intermittent lever is not available in this location, pull back trim pad far enough to gain working clearance to the door lock at the door inner panel access hole.
5. Using a flat screw driver or other suitable tool, carefully bend the door lock intermittent lever in-board far enough to gain operating

Doing It The Hard Way . . .

Ralph: "How do you manage such long holidays?"

George: "It's easy—one month on the sand and eleven on the rocks."
(*Magic Circle*)

clearance for the intermittent lever. A few thousandths of an inch bend is all that is usually required. Note: In some cases, the rear door lock free-wheeling lever may be set in such a position that it will hinder the bending operation. If the free-wheeling lever must be tripped to its opposite position, care must be taken to return the lever to its original position.

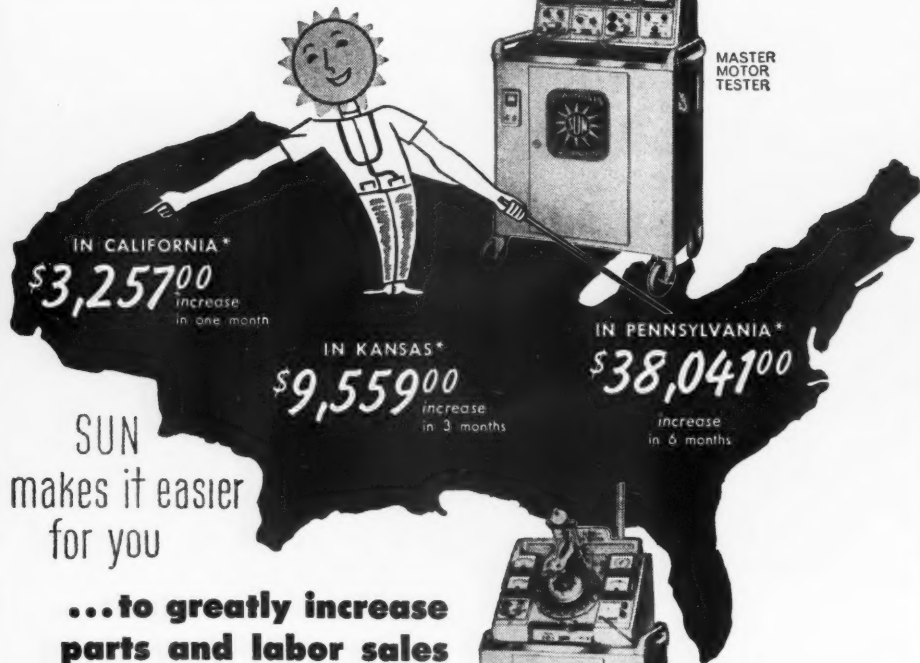
6. Check the operation of the door lock.

7. Attach trim pad.

8. Install garnish molding or finish panel and locking rod knob.

in EVERY part of the country...

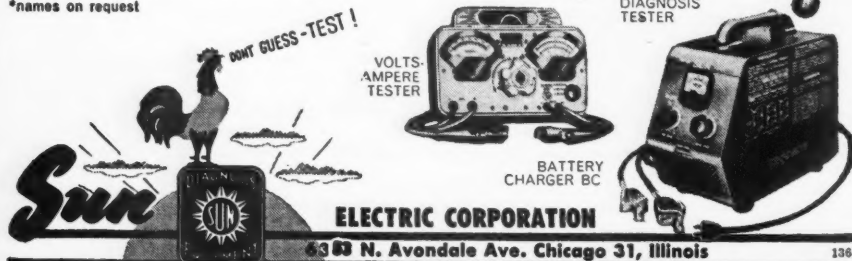
in EVERY size service shop...

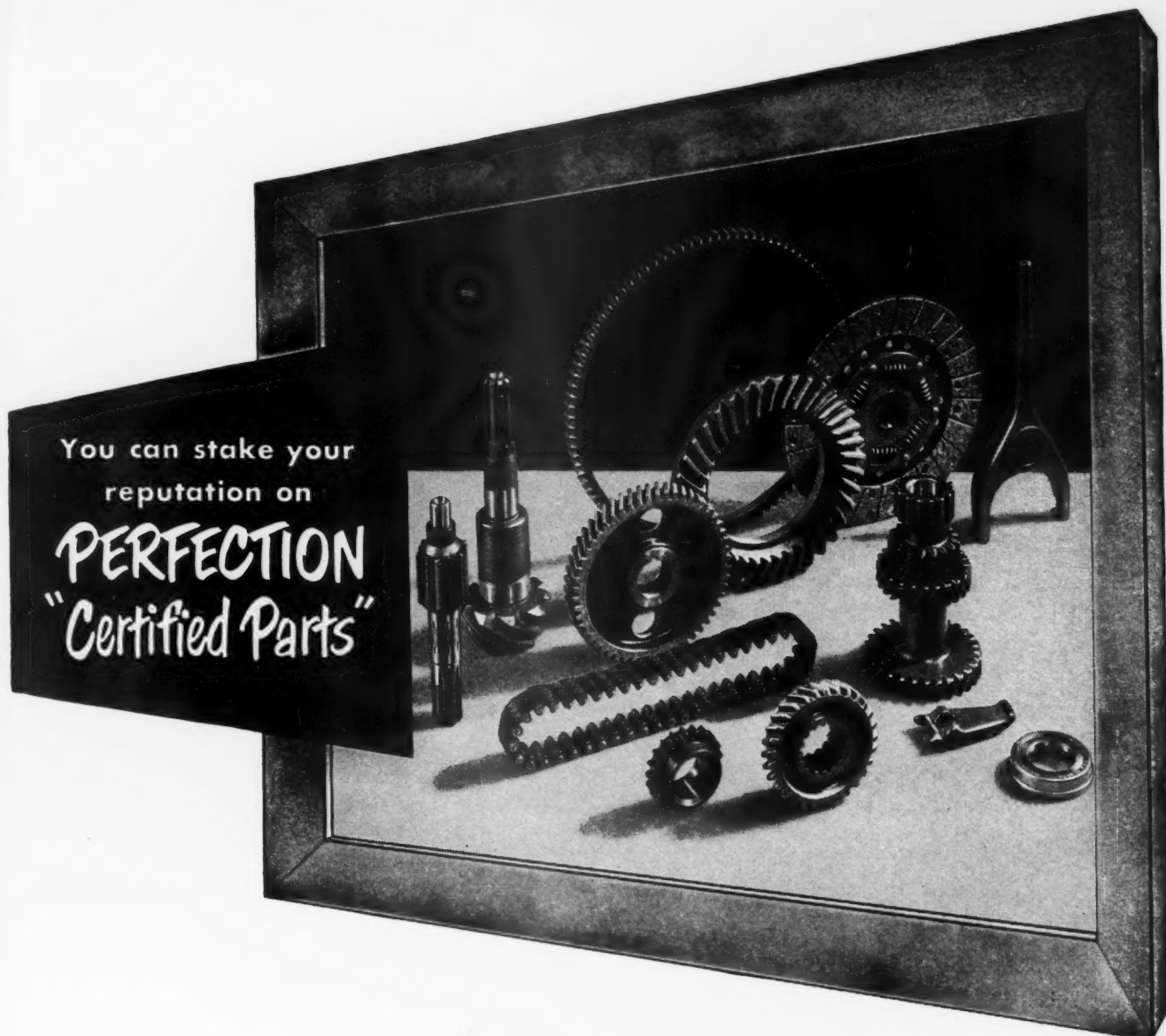


The use of SUN Scientific Automotive Testing Equipment can result in a remarkable increase in needed labor and parts sales as indicated in these examples selected from among thousands of dealers and service shops all over the country. Just as important is the customer confidence gained through the elimination of costly comebacks and chronic complaints. Your SUN Equipment gives the service salesman an extra selling tool that helps him to show the car owner exactly where, why and how needed repairs should be made. The SUN Line is complete—enabling any dealer or service shop to have exactly the right units to fit his shop needs. Newly engineered 6-12 volt equipment is now available or your present equipment, through the SUN Modernization Program, can be quickly converted to serve vehicles of both voltages. Talk to your nearest SUN Representative or write TODAY directly to SUN.

send for the New SUN Scientific Automotive Testing Equipment CATALOG

*names on request





You'll find it good business to install **PERFECTION** Certified Replacement Parts. The low installation cost wins the favor of your customers, and the dependable performance of these products makes your customers real boosters for you.

Behind the parts constituting this great line are over 30 years of **PERFECTION** manufacturing achievement. This important "know-how", the use of the finest materials, heat treating under scientific control, precision accuracy and rigid inspections throughout production—all contribute to furthering the fine reputation accorded **PERFECTION** products.

There is a **PERFECTION** jobber near you. He carries a representative stock of these quality parts and is prepared to render prompt, efficient, friendly service. If you do not know his name, write us.



Perfection Gear Company *Harvey, Illinois*

PERFECTION PRODUCTS INCLUDE: Silent Timing Gears, Metal Timing Gears, Silent Timing Chains, Sprocket Gears, Transmission Gears and Parts, Differential Ring Gears and Pinions, Differential Cases and Parts, Fly Wheel Gears, Clutch Plates, Pressure Plates, Clutch Cover Assembly Parts, Clutch Forks and Parts, Clutch Throwout Bearings, Clutch Rebuilders.

"We speeded production 40% by switching to *SKIL* tools!"

says **Eddy Fleischman**, treasurer,
Frankie & Johnny Automotive Service, Inc.
New York, New York

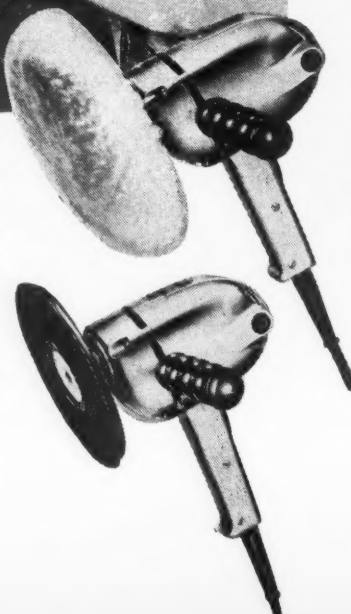
"We've been in business 22 years. And we've used most of the different makes of automotive tools," says Mr. Fleischman. "But when we tried SKIL Polishers and Disc Sanders we gained at least 40% in production speed. As a result, we now use *only* SKIL tools.

"Our men tired easily using other makes, tools that didn't have the power, balance and ease of handling you get in SKIL Polishers and Disc Sanders. Our experience with SKIL tools has been the best! We now have seven Polishers and eight Sanders."



SKIL 7" Polisher, Model 570, Easier Operation in Any Position. Fully-powered, latest design. Lighter than many *less* powerful polishers, this SKIL tool weighs only seven pounds. Ideal for small garages, service stations, dealer service departments. Full size 7" pad makes quick work of polishing jobs. Speed: 1300 r.p.m., no-load.

SKIL 7" Disc Sander, Model 551. Perfect Balance Assures Easier Control. Newest in low-priced disc sanders. Amply powered for every stage of body refinishing. Compact, light in weight for maximum ease of handling. Full size 7" disc for most efficient sanding at any angle, in any position. Speed: 4200 r.p.m., no-load.



Tony Oyola Finishes a Car with a SKIL Polisher and special feather-edging attachment. Says Oyola, "It doesn't take long to finish a car with these fine SKIL tools. The finish is *better*, and I am never tired after using them all day. This wasn't the case with the other makes we had."



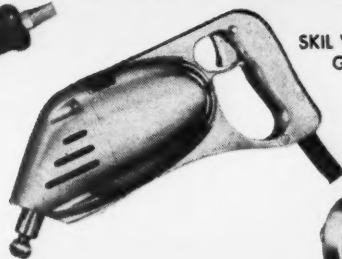
Weight and Control Centered Over Pad give better control, greater ease of handling, prove far less tiring than ordinary disc sanders and polishers.



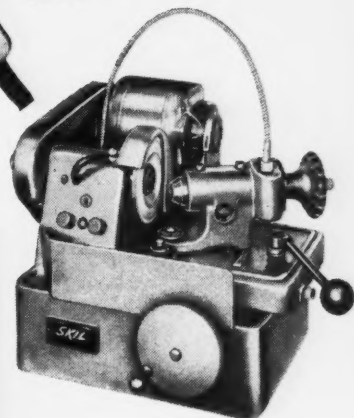
SKIL Drill



SKIL
Disc Sander



SKIL Valve Seat
Grinder



SKIL Valve Shop

**Call Your SKIL Jobber—Today
—for Information on
World's Finest Automotive Tools!**

SKIL
PORTABLE TOOLS

Made only by SKIL Corporation
formerly SKILSAW, Inc.
3031 Elston Avenue, Chicago 30, Illinois
1041 Dundas Street West, Toronto 9, Ontario
Factory Branches in All Leading Cities

"It sure sticks"

James D. Dayton
Jimmy Sacco Auto Body
Atlantic City, N. J.



PERMACEL®
MASKING TAPE

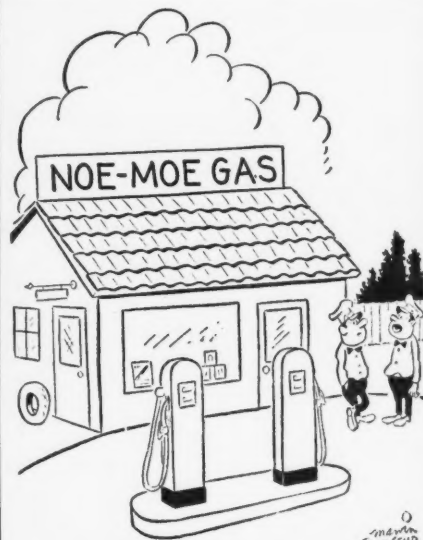
INDUSTRIAL TAPE CORPORATION, NEW BRUNSWICK, N. J.

Commercial Automotive . . .

Continued from Page 55

the fringe of the downtown business district approximately one mile from the principal retail stores. Customers cannot therefore leave their cars while they walk into town on other errands. Notwithstanding, the 33-year-old company has developed a volume that requires the services of 160 to 180 employees in its six major departments.

The six departments are: car sales, service, parts sales, tires, appliances, and auto loans. The firm is a DeSotoPlymouth dealer and distributor, as well as an aggressive tire merchandiser. In 1949 its sales crew sold over 5,000 inner tubes in an intensive merchandising campaign. Appliances were added in February last year and have proved to be entirely successful. The appliance display room is placed on one side of the service department's entrance driveway, with the tire display room on the



"Business sure has been slow since we went into partnership, Moe!"

other. The driveway is wide enough so that there is ample parking space in front of both sales rooms for customers to leave their cars while they shop inside.

While appliances are not related to automotive sales, they work together very nicely with the other departments. They not only add one more good, profit-building de-

(Continued on page 132)

FRANK HELVEY,
Vice-President and General
Manager of McMillian's believes
in bringing in profitable
alignment business by
"telling the world" about his
new "Bear" Telaliner—

He writes:

"We're well pleased our volume
of business has increased since
we installed the Telaliner... We're
equipped now to give complete align-
ment service to our customers."

Frank Helvey
Vice-Pres. & General Manager

DON McMILLIAN, INC.
Amarillo's Friendly Ford Dealer

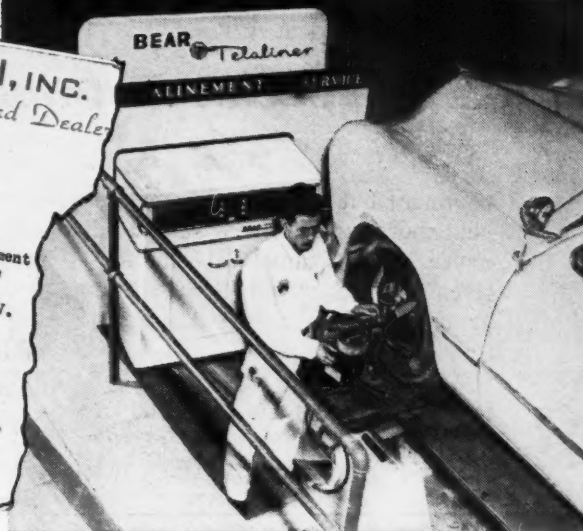
Yes, Mr. Ford Owner,

We have just installed the most modern,
scientific wheel alignment check-up and
correction in Amarillo, the NEW
TEL-A-LINER
It's amazing! You can see the exact alignment
condition of your car... you can see the
corrections as they are being made, right
on a screen. It's sort of like watching T.V.

own operating our new
duate of the Bear Safety
ly qualified to analyze
ults with the Tel-a-liner.

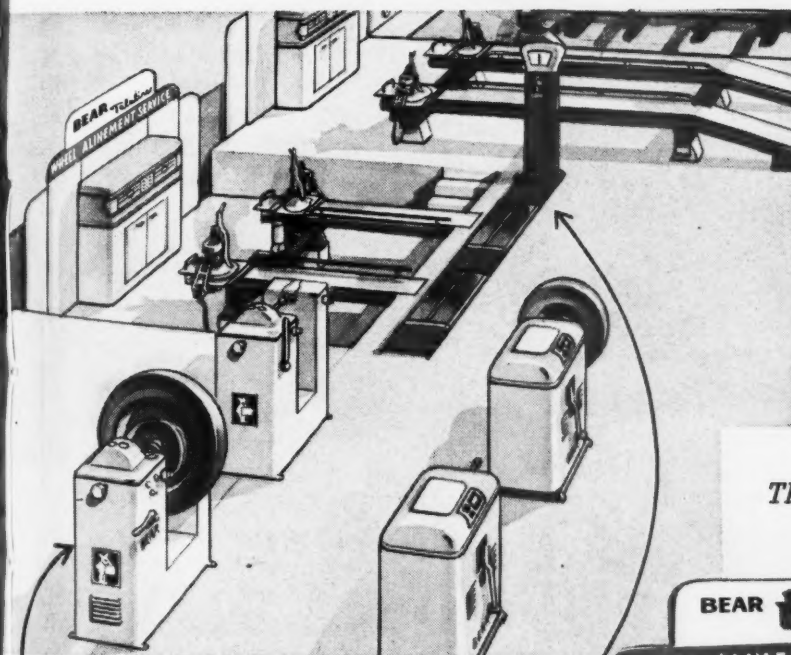
Yours for SAFER driving,

Frank Helvey



Enthusiastic Operators Everywhere Keep Proving...

the **MORE "BEAR"** you have...
the **MORE MONEY** you make!



**TYPICAL "BEAR" UNITS PROVIDING
"BIG PROFIT" SERVICE FOR McMILLIAN**

Dy-Namic Balancer "330" Famous "330" gives
higher profit service by getting the wheel off the car
and providing a quick check of static... and Dy-Namic
un-balance. The trouble is quickly and easily located...
right on the Balancer... and profitably corrected
to the complete satisfaction of the customer.

Wheel Alinement Gauge "240"

Placed where the driver can see the
slippage per mile when he drives over,
this unit is an EXTRA PROFIT sales-
man. Quickly indicates toe-in or
toe-out condition of wheels. It
demonstrates that the job is
done right after job is finished.

McMillian's experience with "Bear" as a go-getter
for *high profit* alinement business is typical of
"Bear" equipped shops in every part of the country!
Enthusiastic reports from "Bear" operators agree
unanimously that their "Bear" attracts **BIG Profit**
volume business—and the **MORE "BEAR"** they
have... the **MORE MONEY** they make! You can
join the "Bear" ranks with the popular "Bear" Plan.
With this Plan... You make **MORE MONEY**
with "Bear"... You use "Bear" Signs as business-
getters... and You use "Bear" Equipment to do
the job right—*quicker and easier!*

Write today for Big New "Bear" Catalog.
Bear Mfg. Co., Dept. M-1, Rock Island, Illinois.

This Popular **"BEAR" Telaliner**
will make more money for you...

PRESENTS DRAMATIC INDICATION OF STEERING
TROUBLES ON BIG TELALINER SCREEN!
CUSTOMERS ARE SOLD ON "SIGHT!"

- ✓ ACCURATE ELECTRO-MAGNETIC
CHECKING AND CORRECTION
- ✓ CHECKS ALIGNMENT FROM
WHEEL SPINDLE OR RIM
- ✓ SAVES TIME! NO GETTING OUT
FROM UNDER TO CHECK
- ✓ CHECKS MECHANICALLY AS
WELL AS ELECTRICALLY



"BEAR" SIGNS BUILD YOUR BUSINESS!

It pays to hang these ADDED PROFIT "Bear" Signs
now being advertised regularly in

POST and
Journal

partment but attract a number of customers who otherwise would never visit Commercial Automotive. They thus bring traffic that brings additional sales to the other four departments.

All departments work together to raise over-all sales levels, of course; and it is the job of the advertising program to make the

most effective use of the merchandising possibilities of each department. The advertising department accomplishes this through adhering closely to the following principles of operation:

1. Find your theme and hammer on it repeatedly.
2. Diversify your subject matter.

3. Diversify your media.
4. Promote traffic-building merchandise and services.
5. Get the local slant.
6. Make it seasonally effective.

The cumulative effect of advertising is well-known, but the only way to realize it is by frequent repetition of a specific advertising "message," Mr. Hawkins believes. That message may be an item of merchandise such as an appliance, an accessory, or a tire, or a service such as a tune-up job or credit policy. But regardless of the message, sales do not really "take hold" unless there is constant repetition. The technique of repetition was largely responsible for the unusually high sales of inner tubes.

Before too frequent repetition of an item approaches the point of monotony, however, Commercial Automotive shifts its focus to another item or service. The tire department item most recently advertised was a competitively priced tire. Besides providing variety of copy to hold the interest of their regular customers, frequent shifting of this sort enables the company to reach the widest possible variety, including all income groups. Where the safety tube is something of a luxury item, the competitively priced tires ap-



**milled,
curved-tooth files**



EASILY CURVED . . . UP OR DOWN

HELLER BROTHERS COMPANY
America's Oldest File Manufacturer
NEWCOMERTOWN, OHIO



Executive: "Where's my pencil?"
Secretary: "It's behind your ear."
Executive: "Come, come, I'm a busy man. Which ear?"
(Exhaust)

peal to all groups. The advantage of having diversified merchandise is apparent here, as the company has a wide variety of items with good traffic-building appeal, to choose from.

Commercial Automotive employs all principal media of advertising, including billboards. The latter are used primarily for institutional advertising. Approximately 2 per cent of the gross is spent for advertising. Newspapers still take up the biggest share of the advertising budget. The firm has used radio with consistently good results and is currently sponsor-

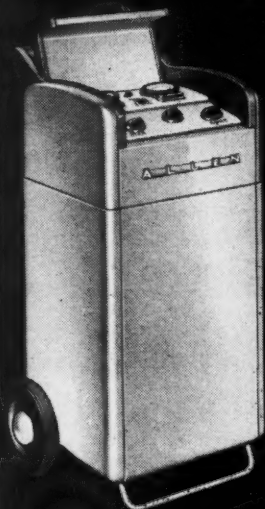
(Continued on page 134)



MORE SHOPS ARE USING **ALLEN** 6 and 12 Volt Chargers THAN ANY OTHER MAKE!

... and here's why! Allen 6 and 12-volt battery chargers are outselling all others for the simple reason that Allen design and construction gives shops *more* features that result in more profitable servicing ... maximum efficiency, longer life, easy operation, and low power consumption ... and backed up by a nation-wide service organization. See the Allen line at your wholesalers — *judge for yourself!*

ALLEN ELECTRIC & EQUIPMENT CO.
KALAMAZOO, MICHIGAN



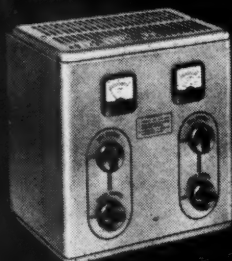
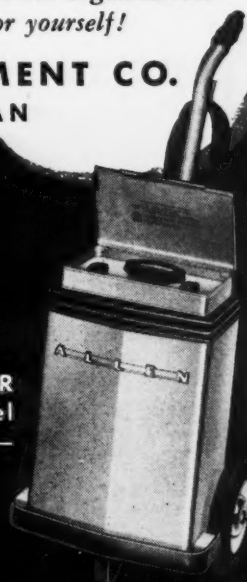
DE LUXE 6 and 12-VOLT FAST-SLOW CHARGER

Model F-260—The ultimate in fine equipment—tests, slow charges, fast charges. Automatic timer, disappearing leads, easy to operate. Exclusive test feature shows true condition of battery.

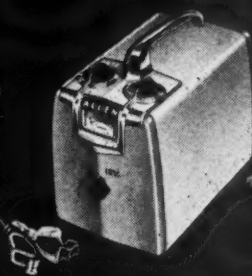
STANDARD 6 and 12-VOLT FAST-SLOW CHARGER

Model F-220—The finest moderate priced wheel mounted charger made. Has 5 second battery test—fast and slow charges. Automatic timer.

*Ask your Allen Jobber
about easy payments
and trade-in allowance*



UNITRON SLOW CHARGERS —
A "must" for complete servicing. Model F-202 charges up to 24 6-volt, or 12 12-volt batteries. Easy to mount on wall.



DELUXE PORTABLE 6 and 12-VOLT FAST-SLOW CHARGER —
Model F-88 — The finest portable charger made. Has all big-charger features, including automatic timer, large cooling fan, rugged construction.



DE LUXE 6 and 12-VOLT FAST-SLOW CHARGER —
Model F-90—A portable charger with all the plus conveniences of wheel mounting. Easy to wheel, lift over curb, or into service truck. Includes automatic timer.



"CELL-CHEK" BATTERY TESTER
Model F-20—Shows at a glance—State of Charge, Cell Voltage, Individual Cell Condition! Fast, clean, accurate testing without hydrometer.



Send for **FREE FOLDER**

Tips on how to increase your battery servicing income, and complete information on Allen Battery Chargers.

ALLEN ELECTRIC & EQUIPMENT CO.

1809 N. Pitcher Street, Kalamazoo, Michigan

Send me free literature on 6 and 12-volt Battery chargers.

NAME

ADDRESS

CITY STATE

Commercial Automotive Cont'd from Page 132

ing a local broadcast of a weekly national television program. Direct mail always gets results, Mr. Hawkins states, and the firm sends regular mailings, twice a month, to their list of 10,000 customers.

The company naturally expects to turn a profit on merchandise it advertises. However, the main

point that is kept in mind in selecting items and services for promotion is how effective they will be in drawing traffic to the plant. To give an attractive price appeal, the margin must sometimes be shaved thinner than usual; though this is usually compensated for by greater volume and therefore lowered service costs. At the same

time the company does not expect to sell only the item or service advertised as a result of a promotion. A brake adjustment special not only leads to sales of other service work, but to sales in all other departments which the customer may visit at that time. It further establishes a habit with many customers of coming to Commercial Automotive. New cars, tires, and appliances receive the largest share of the advertising expenditures.

The firm has found that terms which require at least a small down payment will attract more traffic to the plant than terms which require no down payment at all. The reasoning apparently is that where no down payment is required, there must be some sort of financial trap concealed in the contract. By requiring a down payment, this distrust of a "something for nothing" offer is re-

The Most Satisfactory
IGNITION CONTACT
Ever Designed!



**ALL THESE ECHLIN EXTRAS
EXCLUSIVE IN THE
ECHLIN LINE**

**COPPER CONDUCTOR STRIP
STAINLESS STEEL FLOATING SPRING
NON-SLIP BUSHING
OVER 50% MORE CONTACT AREA
FOR ALL 3 IGNITION SYSTEMS**

ECHLIN
Ignition

PRODUCT OF

ECHLIN

**CONTACTS
COILS · CONDENSERS
& OTHER AUTOMOTIVE
ELECTRICAL PARTS**

ECHLIN MANUFACTURING COMPANY Dept. MA, 220 EAST ST., NEW HAVEN 5, CONN.



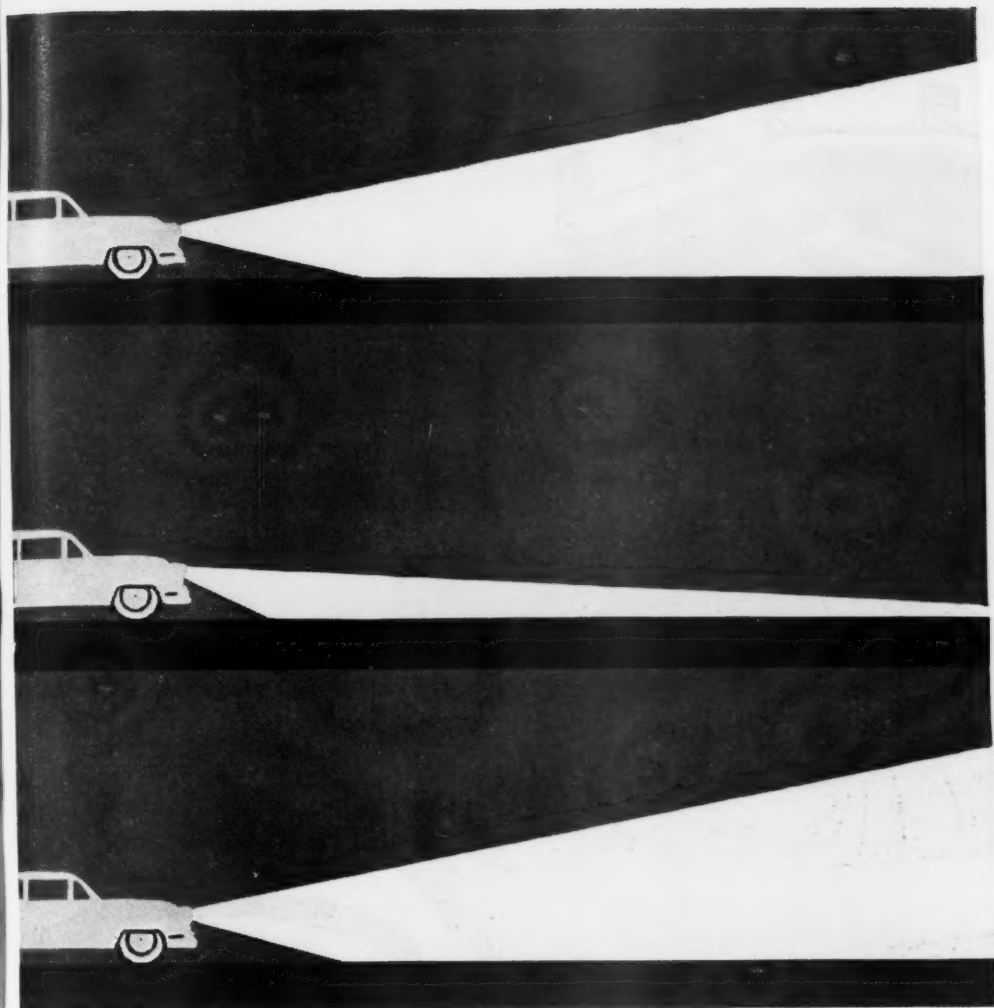
Finck

"I asked you to bring a welding rod!"

placed by confidence in the integrity of the dealer.

Applying this psychology, the firm has sold nearly everything but cars for a \$3.98 down payment. This is enough of a payment so that the customer has some investment in the merchandise, yet it is small enough so that the great majority of potential purchasers will be able to buy. By way of diversification of credit terms, the company's future advertising plans call for emphasis on the amount of regular payments as well, with the amount

(Continued on page 138)



BRIGHT

DIM

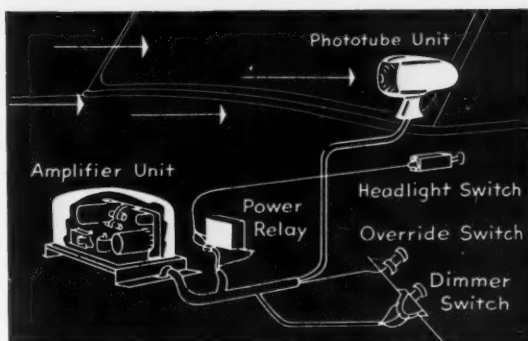
BRIGHT

Automatically AT NIGHT!

Now car owners can drive after dark and really like it! Guide's new Autronic-Eye automatically takes over the entire job of headlight control . . . adds safety and convenience by ending "when-to-dim" guesswork.

The Autronic-Eye phototube unit on the instrument panel picks up approaching headlight beams . . . flashes an electronic command to an amplifier under the hood—and *lights dim automatically!* When all oncoming traffic has passed, the *Autronic-Eye brings headlights back to bright again—automatically!*

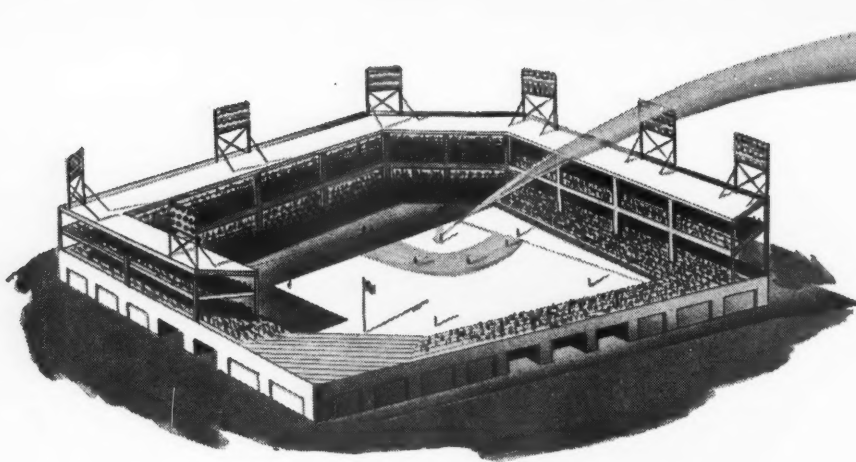
Ask your Cadillac, Oldsmobile, Pontiac or Chevrolet dealer for an Autronic-Eye demonstration . . . or write for complete information.



AUTRONIC-EYE[®]

AUTOMATIC HEADLIGHT CONTROL

GUIDE LAMP DIVISION • GENERAL MOTORS CORPORATION • ANDERSON, INDIANA



YOU JUST CAN'T DO BETTER...

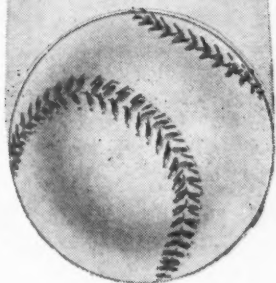
This set will out perform any other piston ring set in the "hard to hold" jobs regardless of kind, design or price

CHROME CONTROL LEAK-PROOF
REG. U. S. PAT. OFF.
PISTON RINGS



McQUAY-NORRIS MANUFACTURING CO., ST. LOUIS 10, MO.

. NO, YOU JUST CAN'T DO BETTER!



of a typical weekly payment getting the main attention. The considerably smaller amount of a weekly over a monthly payment will get good traffic-building results, it is expected.

In developing their own advertising campaigns and methods, Commercial Automotive uses a higher proportion of individually

prepared advertising copy than do most automotive dealers. Mr. Hawkins believes this gives them an advantage by enabling them to slant more specifically to local conditions and consumer preferences, and gives their advertising greater individuality. Another characteristic he strives for is readability, giving the reader just

enough information to get his interest and to inform him adequately about the product and the price. Too much information defeats its own purpose because the reader will not look at any of it, he believes. In general, his company's ads contain more white space and less text than the average automotive advertisement.

Individuality is also achieved in ads through the humorous approach. A round-eyed cartoon character has reappeared in a number of Commercial Automotive ads, with excellent attention-getting results. He is used with restraint so that readers will not tire of the novelty. Similar methods are used in direct mail advertising.

Finally, ads are tied into seasonal needs as closely as possible. Safety tubes, for example, are promoted aggressively in the summer when car owners are planning long trips, but not in the winter when their attention is on winter tire needs. Again, the company's wide assortment of merchandise enables it to select seasonally attractive items. While they will not buck a negative seasonal trend, they will buck a downward sales trend.

Basic Policies Established At PAS Committee Meeting

A general committee meeting established basic policies that will govern operation of the 1954 Pacific Automotive Show, to be held March 4, 5, 6 and 7, 1954, in the Seattle Civic Auditorium.

Of primary importance was the adoption of a new schedule of show hours, aimed to give more time for attendance at the show by the general automotive and allied trades.

The new schedule of hours was guided by the results of a recently-conducted poll of manufacturers, manufacturers' representatives, and wholesalers who participated in the 1953 PAS in San Francisco.

The meeting was conducted by Frank B. Smith, president of the 1954 Show, A. J. (Orie) Thompson, assistant to the president, and J. Leonard Gibson, executive manager.

You Can Now Service BOTH 6-12 Volt Batteries with the flick of a switch with The ORIGINAL *QuickCharger*



You can depend on a Quick Charger to charge BOTH 6 and 12 volt batteries . . . economically . . . with complete safety and satisfaction. Its easy-to-operate controls may also be set for slow or gang charging. Precision made throughout . . . with sturdy handsome cabinet. Fully guaranteed by the folks who pioneered the fast battery charger, Quick Charge assures you of years of peak-performance. WHY WAIT? Let QUICK CHARGE help you modernize your service!

MODEL Q-95C
Combination 6-12 volt charger
Portable . . . (or may be easily detached from cart and carried by handle).

MANY OTHER MODELS TO CHOOSE FROM!



MODEL QSP
Portable . . . oil fired.
Many other models available in both oil and gas fired, portable and stationary.

GET ALL THE STEAM OR HOT WATER YOU NEED . . . INSTANTLY . . . WITH A *Quick Steam Cleaner!*

Designed to Cut Maintenance Costs!

Quick Steam will ring your register constantly with steam-cleaning profits. Designed to put out a tremendous volume of steam for cleaning . . . and all the hot water required for washing and rinsing. Its economical operation and maintenance saves you money. Fully guaranteed for peak-performance. Write today for details!

Ask about our Model QSB Stationary . . . gas-fired. Operates on any type gas. A real value.

SPECIFY QUICK-SO COMPOUND FOR YOUR STEAM CLEANER!

Gentlemen: Please send me your FREE catalog. I am interested in:

- ☐ QUICK CHARGE Battery Chargers
☐ QUICK STEAM Steam Cleaners

Name _____

Address _____

City _____

State _____

Quick Charge

1750 NORTH EAST 10th ST.
OKLAHOMA CITY, OKLAHOMA

Quick Charging Equipment and Accessories
Steam Cleaners • Oil Cleaners and Quik

YOU'RE SAFE...



when you install
dependable

CARTER

FUEL PUMPS

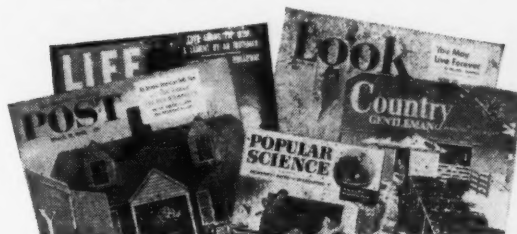


Install Carter Fuel Pumps with confidence of complete satisfaction even to your toughest customers.

Carter Pumps are chosen as original equipment by 12 leading manufacturers and the application list is growing constantly to give you additional fuel pump volume. See your Carter supplier for complete information.

Carter Power Center Fuel Pumps are being pre-sold to your customers with a powerful National Advertising Campaign in

The Saturday Evening Post, Life, Look, Country Gentleman and Popular Science.



Ask your Carter supplier or write for information about Carter Movies to advertise your shop and services.



CARTER CARBURETOR CORPORATION • St. Louis 7, Missouri • Division of American Car and Foundry Company

Modern Masking . . . Continued from Page 65

covering a floor, or what have you, knows that there is a natural tendency to stop occasionally to look at an interesting picture, cartoon, ad or news item. Curiosity is a healthy condition in its place, but it can certainly slow down a masking operation. That costs money! Masking paper has only one purpose, and that is to mask a car for painting quickly and easily. Also,

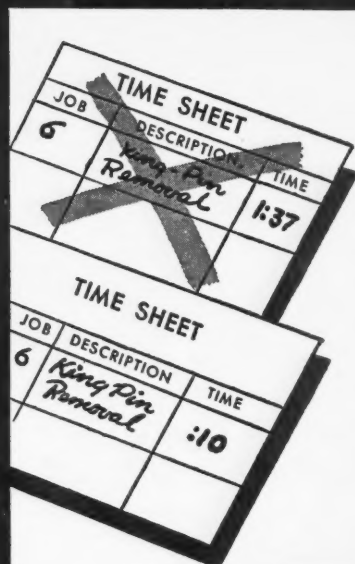
in the process of laying a sheet of newspaper out on a dirty work bench or dusty hood in order to apply the tape, there's always the chance of picking up dust and dirt which will impair the adhering quality of the tape. This would cause the tape to come loose and fall on a freshly painted surface.

The masking machines, which have several widths of paper and

tape (including separate rolls of tape in different widths) at the painter's fingertips, enable certain operations to be done that would be difficult with newspaper. Some of these are shown in the illustration. For instance, a wheel can be masked in a few seconds so that it can be sprayed without hitting the tire. This "funnel shaped" mask would be almost impossible with newspaper. Door edges and jambs can be masked with the paper so that they can be sprayed without over-spraying onto the upholstery.

The machines are compact and adjustable to practically every body shop's need. Different suppliers, of course, offer different types, but generally speaking they can be obtained for wall mounting, bench mounting, or as portable units on wheels.

NOW! PUSH KING-PINS IN MINUTES



WITH THE

NEW OTC

HYDRAULIC KING-PIN PUSHER

Designed with the famous OTC CENTER-HOLE, the 17½ ton ram with its accessories will pull or install cylinder sleeves, shafts, bearings, gears, etc. Completely portable (only 10 lbs.), it does scores of automotive jobs.



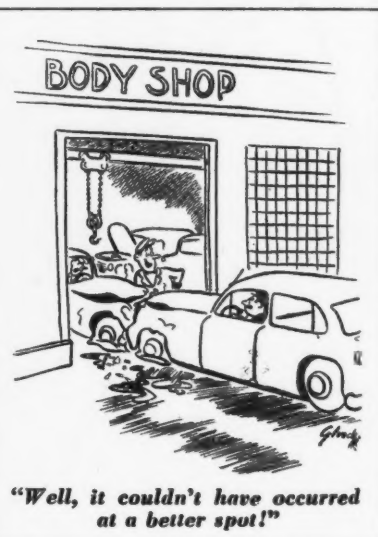
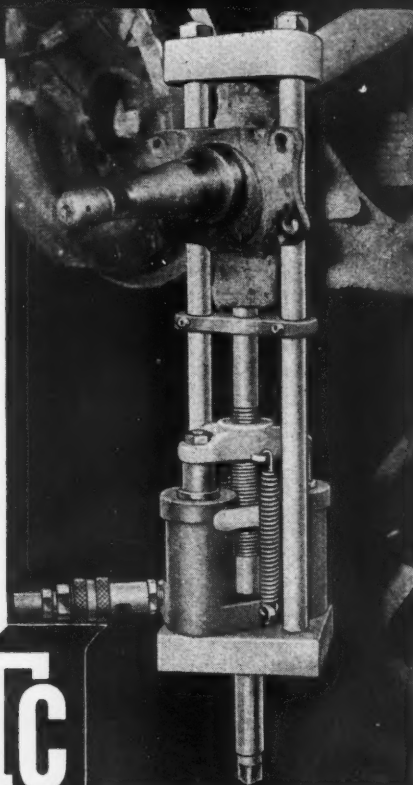
OWATONNA TOOL COMPANY

321 CEDAR STREET • OWATONNA, MINNESOTA

From hours to minutes—for a king-pin job. With the OTC 17½ Ton Power-Twin and King-Pin Pusher, you remove car and truck king-pins 75% faster. No hammering and damaging parts—no torque to work against—you do the job 90% easier. Now this time consuming job can be done at a profit on a flat rate basis, and the tool is paid for in a few jobs. Ask your dealer for a demonstration.

Booklet describes complete line and uses of OTC Tools

WRITE
FOR
FREE
BOOKLET



A special paper supplied for masking is treated to withstand the harsh treatment from wet sanding, penetration of lacquer, enamel, underbody coating, paint, varnish and water. It is made to resist falling apart and to prevent wet paint from bleeding through. There is no chance of finding small pinholes of the type often found in newspapers.

From the overall standpoint, the cost savings when using the apron type masking machine far exceeds the savings in using newspaper. Over and above the cost savings, there's always the quality of workmanship to be considered, which also pays off in the long run.

Now!! NEW ARO BOOSTER CONTROL HANDLE HAS SELF-SERVICING FEATURE

FOR ALL CHASSIS
LUBRICATORS



Model 60962
ARO DU-ALL
CONTROL
HANDLE

• Self-Servicing Kit

No lost time—no need to send this handle away for servicing! You can easily replace parts in a few minutes . . . just use this kit.

• Boosts Pressure for Tough Fittings

One pull of trigger passes grease at line pressure for normal lubrication. For hard-to-crack fittings, squeeze trigger several times to build up pressure—to 12,000 lbs.

LOW COST! Send coupon for all details.

ARO

LUBE EQUIPMENT

Also . . . AIR TOOLS . . . HYDRAULIC EQUIPMENT
AIRCRAFT PRODUCTS . . . GREASE FITTINGS

The Aro Equipment Corporation, Bryan, Ohio

Without obligation, send bulletin giving complete details on the new Aro Du-All Control Handle.

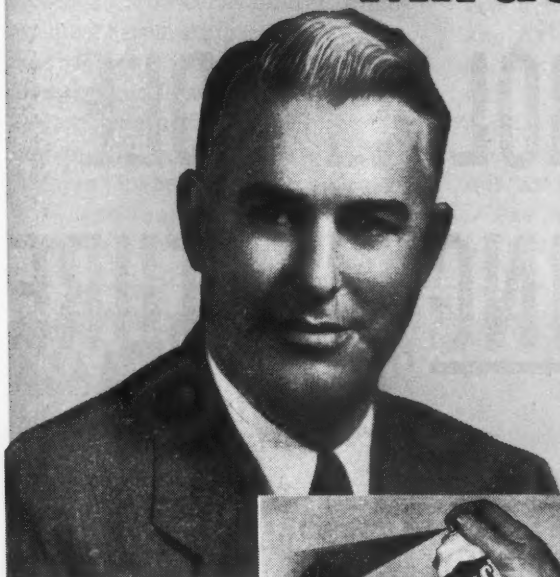
Name

Company

Street

City State

"Miracle Power and dgf Lubrication Saves Stops



—Bob Phelps



FOR DRY PRE-LUBRICATION, just press the button of a dgf Pres-A-Luber. It's clean, easy, effective.



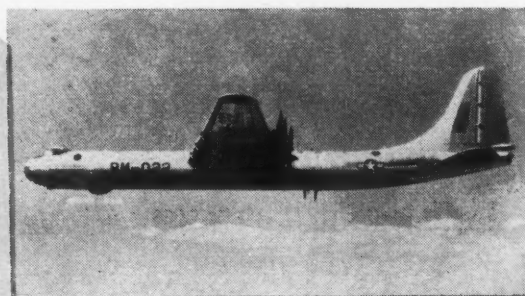
FOR WET PRE-LUBRICATION SPRAY WITH Miracle Power Pres-A-Luber after dgf is used.



TREAT ALL VITAL PARTS with dgf 123 and Miracle Power before re-assembly.



FOR HARD-TO-GET-AT PLACES Pres-A-Lubers are ideal.



dgf 123 IS USED IN AMERICA'S FINEST AIRCRAFT ENGINES by the Army, Navy, Air Force and leading air lines.



Lubricates *Right* ... from the Start
Prevents **DRY STARTING** Damage

Push-Button Us Hours . . . Comebacks"

—Bob Phelps, Phelps-Roberts Corp., Washington, D. C.

"Our mechanics like the Miracle Power and dgf push-button lubrication twins because they're so easy to use. I like it because improved pre-assembly lubrication means better break-ins, fewer come-backs," says Bob Phelps of Phelps-Roberts Corporation, Washington, D. C.

Yes, these Pres-A-Lubers are easy to use. Just press the button and out comes a fine spray of super lubricants—either dgf for dry pre-lubrication or Miracle Power for wet. Miracle Power and dgf are a blend of super lubricating agents including colloidal synthetic graphite in suspension. They cling to metal . . . provide effective "break-in" lubrication . . . prevent complaints and costly comebacks.

Miracle Power and dgf Pres-A-Lubers are a must for every mechanic's work bench. Use modern lubrication methods—order yours today from your Miracle Power wholesaler.

THE AP *Miracle Power Division*
1536 AP Building • Toledo 1, Ohio
Manufacturers of: MUFFLERS • PIPES • MIRACLE POWER • dgf 123



Engineering Highlights . .

Continued from Page 39

lost in sucking in fuel and air, the amount required to push out exhaust gases. In addition, usable horsepower is further reduced by the work required to drive accessories such as the generator, starter, and water pump.

However, if we are to compare engines on some basis of equality, the major friction losses to be considered are those concerned with driving the accessories. It so happens that there is little uniformity in rating *net* engine brake horsepower. Engines are tested on brake dynamometers. If the practice in a given plant is to test without an air cleaner, without a fan, without a starter or generator, and without a muffler—and if cooling water temperature is maintained automatically and hot oil circulated through the engine, the net brake horsepower is going to be high. And it will be higher than the rating for another make where the practice is to take at least some of the accessories into account.

For instance, the fan alone may take as much as 10 hp or more depending on the engine and if that is not considered, the advertised rating will be at least 10 hp more than the customer can get at the wheels. Similarly, the muffler and exhaust piping system may be responsible for a tangible amount of horsepower loss, particularly if the muffler has much back pressure.

Horsepower is an intangible

Taking everything into account, it becomes obvious that when you try to evaluate different makes of engines in terms of horsepower, you are dealing with an intangible. Suppose you compare two engines having an advertised rating of say 150 hp. While neither one may actually give you 150 hp at the road, one may have considerably less horsepower than the other, depending upon how much was charged off to friction losses. The point is that you have to pay for everything you drive off an engine and regardless of how you rate engines on the dynamometer the payoff is what you get at the wheels after everything has been installed on the car. That's paper horsepower vs real horsepower.

Torque plays a major role

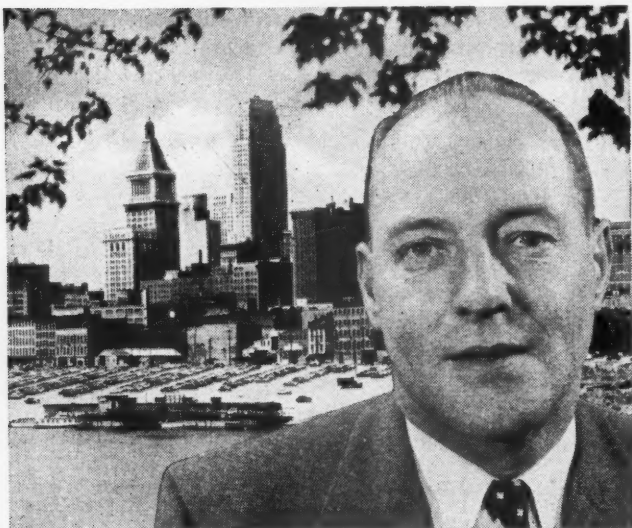
Now let's look at some other terms. Many people have been bothered by the term "torque" at one time or another. Simply stated, torque is *twist*. The simplest example of torque is making up a fastening with a wrench. Here the torque is represented by the amount of load you put on the end of the wrench times the length of the wrench or lever arm. If you exert say 20 lb on the wrench and the length of the wrench is 10 in., then you have applied 200 lb-in. of torque. If you want to be strictly technical always talk of torque in terms of pound-inches or pound-feet (lb-ft)—and not as ft-lb, since the latter refers to "work."

Getting technical again—*power* (Bhp) is the rate at which work is done by an engine and it is equivalent to *torque times speed*. So torque and horsepower are

(Continued on page 146)

Battery Wholesalers say...

"PREST-O-LITE PLAN HELPS



CINCINNATI—W. E. Ferris, Ferris-Buchanan, Inc., says, "Prest-O-Lite had our problems in mind when they made it possible for us to sell jobbers and dealers. We get faster turnover plus maximum profit."



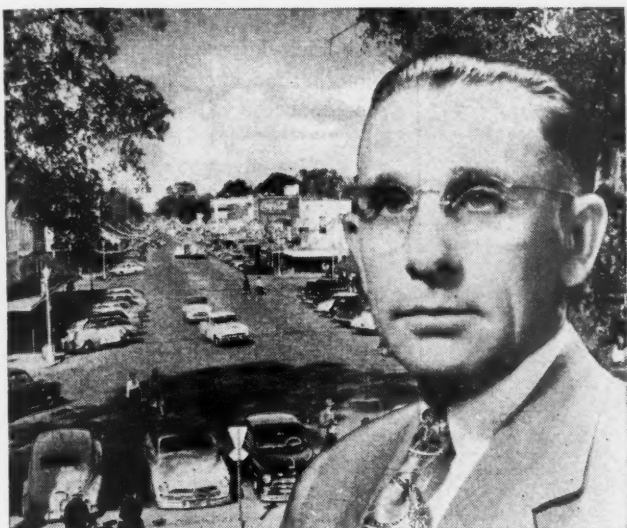
SEATTLE—Jack R. Thornton, E. R. Thornton Company, says, "My dealers like to sell quality and Prest-O-Lite has it. Topped by the premium Hi-Level, the whole line is a profitable one to handle."

HERE'S HOW DEALERS BENEFIT—

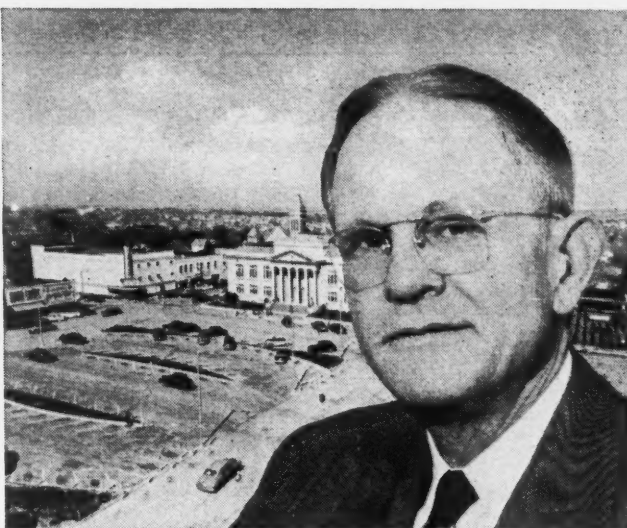
- **FAST SELLING PREMIUM LINE—MORE PROFIT**
- **NATIONAL AND LOCAL ADVERTISING—MAKES PREST-O-LITE EASY TO SELL**
- **NEARBY SOURCE OF SUPPLY—FAST TURNOVER**
- **ON-THE-SPOT ADJUSTMENTS—SATISFIED CUSTOMERS**

prest-o-lite

US SERVE DEALERS BETTER"



COLUMBIA, MISS.—H. W. Hart, Hart Supply Company, says, "Prest-O-Lite's tie-in with professional football is a natural. National advertising and attractive displays help us sell right through the best battery season."



ANDALUSIA, ALA.—M. D. Taylor, Taylor Parts & Supply Co., Inc., says, "We're sold 100% on the Prest-O-Lite protected territory plan. Helps us give our customers better service and we're assured of repeat business."



hi-level

NEEDS WATER ONLY 3 TIMES A YEAR... LASTS LONGER, TOO!

IN NORMAL CAR USE

PREST-O-LITE
believes
IN THE BATTERY
WHOLESALE!

Engineering Highlights . . Cont'd from Page 143

as inseparable as ham and eggs or corned beef and cabbage. Torque is important in engine operation because each engine, regardless of its top rating, has just so much torque available at each speed. In fact, the higher the speed, the lower the torque may be for a given engine. Translating the wrench example in terms of an automobile,

torque is the amount of effort you get at the road in pounds multiplied by the rolling radius of the tire. For each car, it takes a given amount of torque to accelerate when starting from scratch or going up hill or trying to pass another car on the road.

At high road speeds you usually do not have sufficient torque in di-

rect drive or high gear to accelerate around other fast moving cars and it is for that reason that you have to use kick-down with an automatic transmission or overdrive.

But kick-down gets you into a gear reduction or a torque multiplication at the expense of speed. And you have to jam down on the accelerator to boost engine speed in order to pass. If the engine is big enough, this will get you by. If the engine does not have enough reserve power, you find that even with kick-down you may not have enough road speed to pass and the wise operator will put on his brakes and get back into line.

The reason for this is that an engine has just so much horsepower and can deliver just so much torque at a given speed. You can get a lot of torque by getting down into a gear reduction, i.e., by using a longer wrench or lever but since this requires dropping down to a lower speed you lose headway on the road and may find it impossible to overtake fast moving cars safely.

About this "compression ratio"

We hear a lot about compression ratio what with the new high performance, high compression ratio engines now sweeping the industry. What is compression ratio. It is simply the ratio of the cubical contents of the cylinder volume swept by the piston, i.e., when the piston is at the bottom of the stroke, to the volume of the compression space left when the piston is on top dead center. For example, if cylinder volume plus the volume in the combustion chamber, is 49 cu. in. (as in the case of a V-8 with 392 cu in. displacement), and if the volume of the compression space is seven cu in., then the compression ratio would be 49 divided by 7, or 7 to 1.

From an engineering standpoint, the higher the compression ratio, the greater is the efficiency of an engine and the more power you can get out of a given cylinder. Or to put it another way, the higher the compression ratio, the smaller you can make an engine to give the same amount of horsepower. Of course, there are a lot of other
(Continued on page 148)



What QUALITY in a Solder Means to YOU . . .

Quality is a metallurgist selecting metals to be melted and balanced to meet the precise chemical contents specified for Gardiner Brand Solders.

Quality is a chemist carefully testing samples until these precise specifications are attained.

Quality is large sums of money invested in laboratories, research, storage, raw materials and distribution depots, so that Federated Gardiner Brand Solder users can be assured of specification products, uniform, every time.

Quality is the number and character of qualified Federated distributors who maintain stocks of Gardiner Brand Solder for your convenience.

Quality is the effort to achieve perfection . . . and the resources to apply that effort from the depths of the mine to the shipping-case which brings Gardiner Brand Solder to you from Federated, "Headquarters for Non-ferrous Metals."

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120 BROADWAY, NEW YORK 5, N. Y.

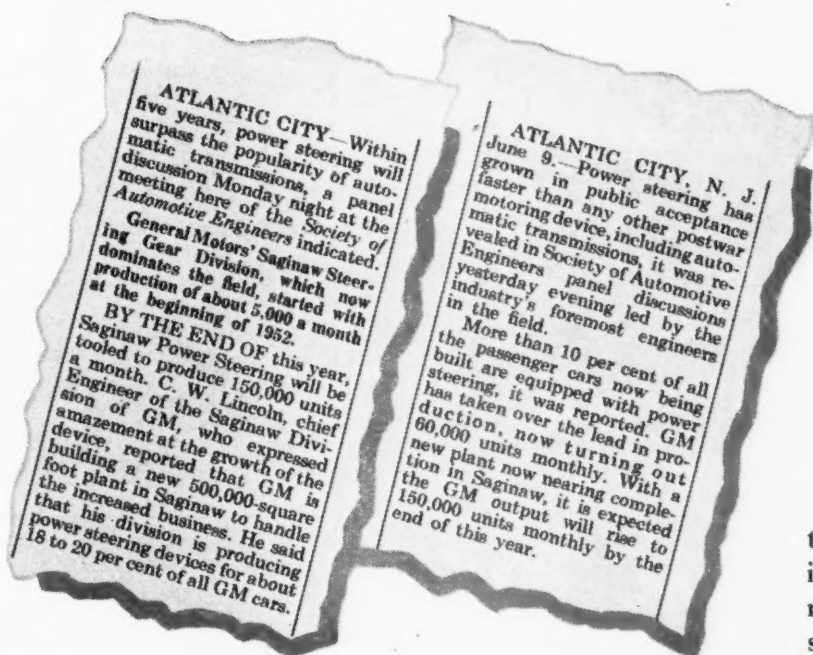


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SAGINAW LEADS RECORD-BREAKING SWING TO POWER STEERING



Almost Everywhere You Look—Tradepapers, Newspapers, National Magazines—Power Steering is Making Headlines!



Reprinted from The Detroit News

Reprinted from The Detroit Free Press

Yes—Power Steering is the *biggest news* in the automotive industry today—and the biggest news in Power Steering is *Saginaw!* Saginaw Power Steering—with the built-in “*feel of the road*” that eliminates any tendency to oversteer—is now available on all

General Motors cars and three other well known makes. Nearly 600,000 drivers are already enjoying it, and *more Saginaw units are being built than all other makes combined.*

The demand for Saginaw Power Steering is growing so rapidly

that a new 11 acre Power Steering plant in Saginaw is now being rushed to completion. There is such widespread interest in Power Steering that we believe every automobile man will want to be well-informed about it. To help give you a better understanding of this important new development, we have prepared an interesting little booklet, “THE FACTS ABOUT POWER STEERING”, that’s yours for the asking. Shall we send you a copy?

Saginaw

POWER STEERING

SAGINAW STEERING GEAR DIVISION, GENERAL MOTORS CORPORATION, SAGINAW, MICHIGAN

Engineering Highlights . . Cont'd from Page 146

things involved to make the job more complicated for the engine designer.

The higher the compression ratio, the more we squeeze the fuel mixture and the greater the pressure it exerts before ignition, the more power we get out of the engine. But the more we squeeze the mixture and the higher the com-

pression pressure the more problems we are faced with. For one thing the engine begins to knock. That's *detonation*, and in order to get proper engine operation it is necessary to use fuels of higher octane rating—in other words, premium grade fuel. Generally speaking, increases in compression ratio must go hand-in-hand with im-

provements in the octane rating of gasolines. That's why engine designers can't jump suddenly into higher compression ratios. They have to wait until the gasoline gets ahead of the engine requirement.

Two schools of thought

On the subject of compression ratio, it is well to note that there are two schools of thought. Before we go into that, let us say that there are two ways or maybe three of approaching the fuel problem so as to get knock-free engine operation. One is known as the "chemical" octane route. Here the combustion chamber is designed to operate on fuels of highest octane rating available. The other is the so-called "mechanical" octane route in which the combustion chamber and engine are designed to take advantage of features of engine design to compensate for higher compression ratio without depending upon high octane fuels. Still an-

"Where to, sir?" asked the chauffeur respectfully.

"Drive off a cliff, James", replied the old gentleman. "I'm committing suicide."

other route practiced by some engine designers is a combination of chemical and mechanical octanes.

In any event, you will find that certain makes of cars must have premium fuel to operate properly—and they will not give knock-free operation without it. On the other hand, there are some makes which have high compression ratio and high performance and yet operate on "regular" fuels. That is the other school.

High compression problems

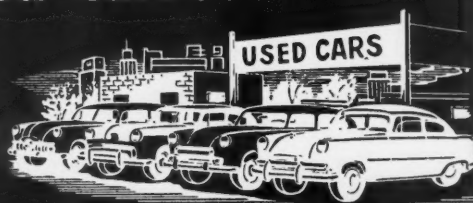
High compression ratio brings up some other problems apart from the fuel. As we mentioned earlier, higher compression ratio means squeezing the charge more and more and that results in higher compression pressures as you measure with a pressure gage. With higher compression pressures the charge becomes so dense that it is difficult to make the spark jump across the gap in a spark plug. In

(Continued on page 166)

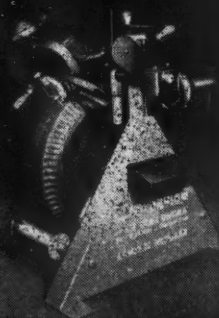
To Move Used Cars... in a hurry

You Need

John
BEAN



SERVICE EQUIPMENT



The **SKID-DEFIER** adds sales appeal to worn tires by grooving. It's a quick, simple, economical operation that lowers buyer resistance when prospects "look at the rubber". The same unit will give you plus profits in your service department by deskidding both new and used tires.



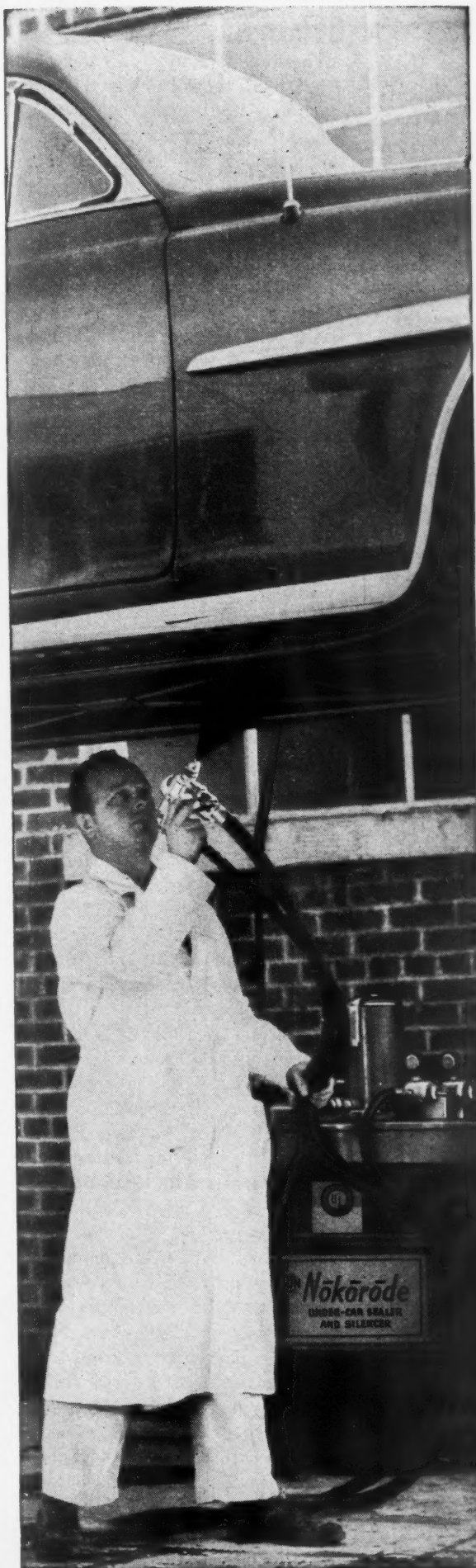
The **VISUCLEANER** makes short work of slicking up old motors and underbodies, or steamcleaning the finish to remove road film or for a paint job. It's a time and money saver in the shop, too, because clean parts shorten working time.

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FOOD MACHINERY AND CHEMICAL CORPORATION
LANSING 4, MICHIGAN



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CAR WASHERS • HEADLIGHT TESTERS • ACCESSORIES AND ALLIED TOOLS



Get 50% More Profit ON YOUR UNDERCOATING JOBS

LION *Nōkōrōde* UNDER-CAR SEALER AND SILENCER

1. 50% More Jobs Per Drum

Nokorode is *concentrated*—no excess solvent. You spray Nokorode to $\frac{1}{16}$ " thickness—and it dries to almost $\frac{1}{16}$ ". It's made *entirely* by Lion under U. S. Patent 2393774, assuring *controlled* uniformity, *controlled* quality. Nokorode goes 50% farther, yet costs no more than ordinary undercoatings. That means 50% more profit for you.

2. Easier Application . . . Lower Labor Cost

Nokorode is *uniform* for smooth application—no troublesome "blobs". . . flows freely, permitting steady pressure in the gun. There's no lost time due to lost pressure.

Nokorode is *stable*, made of highly compatible materials—won't separate in storage, won't clog guns or hoses. You avoid unnecessary clean-up jobs—you save man-hours and money.

Made and guaranteed by

LION OIL



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FREE! Details on how to increase
undercoating profit.

LION OIL COMPANY, El Dorado, Arkansas

Please send information on higher profits
with LION NOKORODE.

Name

Address

City

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MA-9

Mercedes-Benz Continued from Page 53

for extended periods of time without any harm to your engine. In other words, top speed is cruising speed. The top speed is quite comfortable due to the excellent suspension system. The wheel base is 112 in. and curb weight is 2,810 lbs. The coil springs and independent suspension on all four wheels provide a smooth ride and

excellent road holding characteristics. Although the car is a four door sedan, it handles like a sports car. The independent front suspension consists of coil springs with telescopic shock absorbers inside them. The rear independent suspension has double coil springs with sea-leg mounted telescopic shock absorbers. Another

interesting feature, as shown in the illustration, is the frame construction. It consists of seamless steel oval tubes which form the backbone of the car. The suspension system, in fact, has the same basic design as the entire range of Mercedes-Benz cars right up through the 300SL sports car.

The four speed transmission is synchronized in all four gears so that the driver can drop the car from third gear, for instance, down to first gear at a relatively high speed without any double clutching or gear clash. The flexibility of this transmission, in combination with the Diesel engine, provides excellent performance characteristics without any special skill on the part of the driver. The engine will "lug down" to speeds as low as 8 or 10 mph in forth gear and pick up very smoothly. Naturally, due to the fairly small size of the engine, it does not have especially good acceleration at low speeds in top gear, but this is offset by the variety of gear ranges in the transmission.

The electrical system is 12 volts, powered by two 6 volt batteries of the type used in American cars. The accessories are about the same as would be found in American cars, including the usual instruments, fresh air heater (which has defrosters for the side-vents, too), radio, cigar lighter, and turn signals which are operated by turning the horn ring.

The quality of appointments in the Mercedes-Benz is an important feature. The four door sedan comfortably carries five passengers on its genuine leather upholstery seats. The dash panel is made of beautifully finished walnut, a feature not often found in present day cars. One model offers a sliding roof, which is quite popular on the continent. This "extra" is especially nice on a small car, particularly when touring. Another "extra" is a reclining seat with an adjustable back rest and a detachable head rest.

All in all, the Mercedes-Benz 170DS provides very comfortable, economical transportation in a car which sells in the medium price range.

Make V-8 valve grind jobs Pay Off and Get a Double Profit by Installing JOHNSON adjustable tappets



It's easier to sell tappets when the head is off. And you can make a double profit with less work by recommending Johnson Adjustable Tappets with your valve grind jobs. During a valve grind, lift out the old tappets and slip in Johnson Tappets. As simple as that you can make this double profit and save the hard work of grinding off valve stems.

Your customer is better satisfied because you can adjust Johnson Tappets to give him a smoother, quieter engine. Adjustment is simple. Special spanners included with each set of tappets leave both hands free to make faster, more accurate adjustments. Once you've set the patented self-locking screw, Johnson Tappets will maintain the setting.

There's more profit for you if you sell Johnson Adjustable Tappets with every Ford and Mercury V-8 valve grind. Order a supply of Johnson Tappets today.

SEE YOUR JOBBER!

"Tappets Are Our Business"

JOHNSON  PRODUCTS
INC.

MUSKEGON, MICHIGAN

Headed
right for
the top—
in high gear!



it pays to travel with

MERCURY

The cash rewards employees get is not the whole thing, either. Mr. Johnson has been a Chevrolet dealer in Peoria for 26 years. The coming Christmas is the 19th one a Christmas party has been held for employees. These parties are held at the Country Club. A big dinner is held and then presents are distributed. "We have a cata-

log," says Mr. Johnson, "and allow each employee to pick out one present he or she desires. We get this one present that they pick out themselves and then give each one several more.

"For many years each employee has received a Thanksgiving turkey.

"For nine years we have taken

each employee to one of the larger ball games. We charter a bus and all go together. We alternate each year between Chicago and St. Louis and the employees decide among themselves just what game they want to attend. We pay all the expenses, including a dinner on the way home. Employees look forward to this and from 35 to 40 go each year. I, of course, go along with them and do everything they want to do.

"We want our employees to be happy because they can't do good work unless they are happy. Therefore we give them advice on any personal problem they may have at home or elsewhere and try to get them straightened out on anything that worries them. The problems are not all the same, but there are more that have financial problems than any other kind. To these, we loan them money to pay up debts and they pay us as they can. At the same time, we advise them not to go into debt and help them all we can to stay out of it.

The police sent out pictures of an escaped convict in six different poses. A constable in the Mid-West sent the following wire: "Have captured five of them and am on the trail of the sixth."

"We try to be perfectly fair with our employees. We tell them that if they don't think they have the best job in town to go and look around for a couple of days at our expense. Then, if they want to try it somewhere else and are not satisfied, to come back here. They never do this and we know that every man is going to be on his job every morning and is going to do his best all day. Our organization is like one big family. We work with employees and they work with us. We like our employees and think they like us.

"When we started our bonus plan for mechanics, we were having labor sales of about \$6,000 a month. Now we get from \$12,000 to \$13,000 a month. We attribute this doubling of sales to our fair bonus plan. And we attribute our general cooperation of all employees to good wages, plus our efforts to keep them happy."

Barrett Says:
PLUS THE BILLION-DOLLAR HOLE IN THE AUTOMOTIVE MAINTENANCE MARKET...



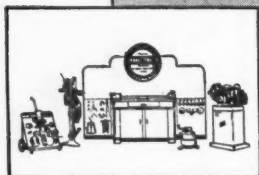
PROMOTE MILEAGE MAINTENANCE OF BRAKES!

- USE THE BARRETT "PEDAL CHECKER"
- PULL A WHEEL
- SELL A COMPLETE BRAKE JOB

New car OWNER MANUALS specify brake maintenance at 5 to 6-thousand mile intervals. National sales of brake work can be increased by a billion dollars if the motoring public is aroused to the need for this regular

SAFETY SERVICE. It costs no more than lubrication during the life of a car, and safer brakes can reduce accidents and insurance rates. Equip your shop for brake work — promote it and profit.

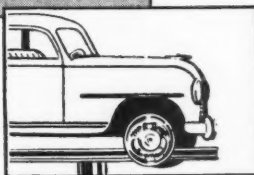
3 WAYS TO SELL MORE BRAKE SERVICE



1 Departmentalize and Advertise
A complete Barrett Brake Department quickly pays for itself — speeds work — attracts new customers.



2 Use A Barrett Pedal Checker On Every Car
Use the Pedal Checker as you use the dipstick in lubrication — to open conversation and measure need for brake service.



3 Pull A Wheel And Sell A Complete Brake Job
Include brake service in a package deal. Sell relines, hydraulic supplies and adjustments when you sell wheel packs.

BARRETT EQUIPMENT CO. • 21ST & CASS • ST. LOUIS 6, MO.

Dealer Bonus!
10-piece hollow-ground
stainless steel cutlery set
worth **\$12.95!**



REAL DEAL! The Hollingshead Profit Pyramid!

You take your pick in this deal—you can have this wonderful cutlery set for only \$1.00, or you can pyramid your profits as high as 59%! You'll welcome other features of the deal, too, including:

1. Small investment needed to participate—as little as \$17.20!
2. Flexible choice of products—you select products that sell best for you.
3. Nine leading WHIZ products included—
MOTOR RYTHM (pts.) • KLEEN-FLUSH • ZORBIT
INSTANT SEALER • KLEAR-FLO • FORMULA III
VENUS POLISH • METAL SEAL • LUSTERIZE AUTO
BEAUTY KIT

Ask your jobber salesman for more news about the new Hollingshead deal on WHIZ products now in effect. Take your premium or your profits—do it now!

Bonus Deal 53-K. You select any 3-case combination of listed WHIZ products. Make your regular profit margin and get the stainless steel cutlery set for only \$1.00 extra!

Extra Profits Deal 53-R. Choose any 3-case combination of listed products and get a 1-dozen case of RUSTOP (radiator rust inhibitor and waterpump lube)—for only \$1.00 extra. Retail value \$12.00!

Super Profits Deal 53-S. Add 2 more cases to either 3-case deal above, and get *at no extra cost* a 1-dozen case of RUSTOP, retail value \$12.00!



R. M. Hollingshead CORPORATION

LEADER IN MAINTENANCE CHEMICALS

840 Cooper St., Camden 2, N. J. • Canadian Offices: Toronto
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makes an extremely expensive place to hang old inner tubes or dirty cover-alls.

Equipment is of no value unless it is properly displayed and kept in good working condition. An ill kept and cluttered shop is by no means an indication of a busy shop. Aside from the appearance standpoint, cluttering can cause

irreparable damage to delicate instruments and equipment.

Present day customers are finicky. They like to see what they're paying for. They'll pry and snoop into the furthestmost corners of a shop to ask questions, and the observations they make with regard to the condition to the shop and its equipment can determine

whether they'll come back for additional service.

Equipment should be arranged to dovetail with the overall dimensions of the shop. The roomier an area it is, the better for everyone concerned. And, of course, the more accessible equipment is, the more likely it is that it will be used to its fullest extent.

Unused equipment can, in another way, contribute to decreased profits. Guess work will contribute to "come backs," which are costly. When a testing machine is crammed into a corner and piled high with junk, it's unlikely that a mechanic will take the trouble to clean it off, bring it out and use it. Another point, and probably one most directly responsible for reduced profits, is that no one will bother to sell a wheel balance job if the balancer



Model 100

Just like a
**MECHANIC'S
RIGHT HAND
MAN**



HUOT deluxe TOOL CHEST

Lots of drawers . . . plenty of usable tool space . . . drawers are lined for the protection of your precision gauges and tools. Will even take care of a husky $\frac{1}{4}$ " Portable Hand Drill—in extra heavy drawers built to stand rough use. All hardware is plated for long life. Two tone blue and gray oil-resistant Hammerlin Enamel . . . just wipe it off to keep it clean. If you plan to move the chest around, it fits nicely on top of a Huot Porta-Cab. Ask your jobber—or send us his name when writing for literature.

18 $\frac{1}{4}$ "x26"x12"
11 STURDY DRAWERS
LOTS OF USABLE TOOL SPACE
TOTE TRAY INCLUDED

No. 250 PORTA-CAB

The Porta-Cab is a portable tool cabinet with a built-in chest, combining all the desirable features of a large tool chest and cabinet in one sturdy mobile unit. Model 100, above, can mount on top.

HUOT is pronounced "HEW-OT."



has been hibernating for six months. No one will bother to check compression during a tune up, and possibly sell a valve job. If the compression tester has been buried under a stack of old tools.

When a shop invests a lot of money in equipment, it realizes the possibilities in earning back the initial cost in a short time. It's only through carelessness that this equipment sometimes falls by the wayside. It would certainly pay a shop operator or service manager to dig around, take inventory of his shop equipment and special tools, and see whether it's paying off like it should. Bring it out, clean it up, and display it prominently and it will begin to pay off.

HUOT Manufacturing Company
585 N. WHEELER AVE. • ST. PAUL 4, MINN.

Please send bulletin on Tool Chests and Cabinets.

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ADDRESS

NAME AND ADDRESS
OF YOUR FAVORITE JOBBER.....

Grab the green jack
with the
"beer mug"
handle

MODEL E12.9A
12 TON



12-ton capacity
HEIN-WERNER
hydraulic JACK

is easy to carry...
...easy to position

Why strain, stretch or squirm? When you have need for an under-axle type jack—grab a Hein-Werner. Convenient handle, on models of 12-ton capacity and larger, simplifies carrying and positioning.

All Hein-Werner under-axle jacks are factory tested at $1\frac{1}{2}$ times rated capacity. They are fast, safe and proven . . . For details, see your H-W jobber, or write us.



HEIN-WERNER CORPORATION
Waukesha, Wisconsin

The complete Hein-Werner line of hydraulic jacks includes: Under-Axle Jacks of $1\frac{1}{2}$ to 100 tons capacity . . . "Bumper-Lift" Jacks for passenger cars . . . "Swift-Lift" and Service Jacks for shop use . . . Adjustable Car Stands . . . "Push and Pull" and "Pushmaster" Jacks for body, fender, and frame repair work.

**Hein-Werner manufactures and sells more HYDRAULIC JACKS
than any other company in the world today.**

Insurance Inventory • Continued from Page 47

300 fan belts, a complete line of mufflers, tail pipes, piston rings, seat covers, floor mats, a new air compressor, a valve grinding machine, electric welder, acetylene outfit, batteries, steel work benches, completely equipped — and a 55-gallon parts washing outfit. There were also about 50 cases of oil, and a stock of anti-freeze.

That's only a partial list of

Shear's stock. He did such a heavy business that he bought at jobber's prices and supplied other garages. In fact it was such a thriving business that Shear was offered \$46,000 during the summer of 1952, and he turned it down.

Cramped for space in the thirty-five by forty-nine foot garage, Shear had his parts boxes stacked in shelves along the wall. Above

the cardboard boxes were racks of tires, and suspended from the rafters were the 300 fan belts.

One February morning Shear got a battery call. He left a mechanic in charge and jumped into his truck with the battery. He heard a fire siren when he was making the change, but didn't give it a thought. Returning to his garage thirty minutes later, he arrived just in time to see the roof cave in!

What had happened? A mechanic was using the acetylene torch when a stray spark sputtered into a container of volatile liquid.

The flames hadn't far to reach to ignite the cardboard boxes above them. The mechanic tried to beat out the fire, but it was too hot. So he hurried to telephone the fire department, located about two miles away.



inspect all caps before snow flies

service Pressurized cooling systems make examination of the radiator cap a "must" when you winterize cars or trucks. Pump efficiency is increased if the coolant is kept under pressure. With 50% alcohol-water solution, the pump is 41% efficient at 0 pounds pressure, 89% efficient at 14 pounds pressure.

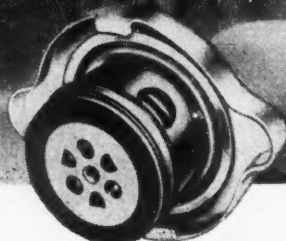
Replace if the cap is broken, worn or the wrong cap is in use. Inturned cap ears must not be bent or worn to a point where they do not retain cap securely on the filler neck cams. The cap should operate smoothly but solidly on the filler neck. Check the gasket in the bottom of the cap. If in doubt, replace the cap.

profit If replacement is necessary, the owner will thank you for installing the proper *Stant* EVRSEAL Pressure Cap. It's a quick profit and builds good will!

easier to sell

Write for catalog, price list and the 3-way engineering-package-display benefits of handling *Stant* EVRSEAL Caps . . . naming your jobber.

STANT MANUFACTURING CO., INC.
Connersville, Indiana



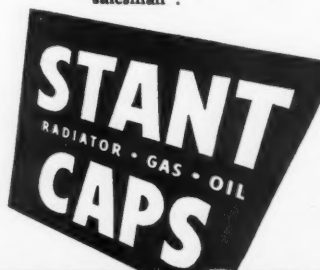
ENGINEERED
Car manufacturers and their engineers have confidence in 100% tested EVRSEAL caps . . . so can you.



PACKAGED
Colorful individual packages . . . easy to locate and inventory.



DISPLAYED
Every one agrees that *Stant's* Metal Display Cabinet is the country's greatest "cap salesman".



*Used on America's Finest Automobiles
as Standard Equipment*

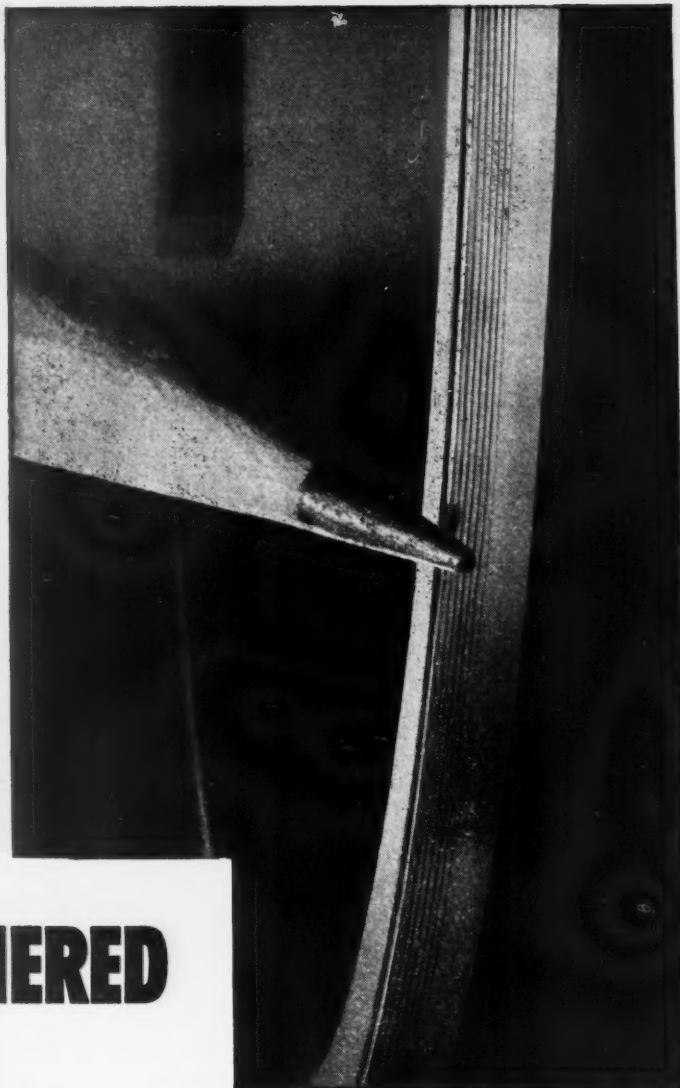


"But Dear, you said you needed a new muffler."

By the time that the mechanic had returned to the fire, the tires were ablaze and melting rubber was dripping on the floor. The fire spread to the fan belts, while below cans of oil and anti-freeze were popping. Within a few minutes the entire garage was a sheet of fire. Firemen couldn't get close to it. So intense was the heat that the steel I-beams started to sag, and soon they too fell into the floor, pulling the concrete and tile walls with them.

Yet, Shear believed himself well insured with \$5,000 on the building, and \$2,500 on the contents. No, his equipment couldn't burn.
(Continued on page 164)

**Efficient
break-in of
new ring sets is
a key point in
customer
satisfaction...
here is
photographic
proof of the
efficiency of**



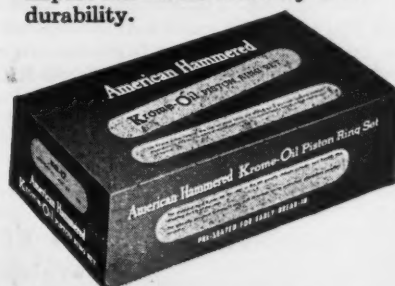
AMERICAN HAMMERED

Krome-Oil

PISTON RING SETS

Customer satisfaction is the key to your continuing profits. The efficiency of American Hammered Krome-Oil break-in plus its superior durability are sure to enhance your customer relations and increase your profit.

Study this photograph carefully. It is a top groove American Hammered Krome-Oil Compression Ring pulled after 5000 miles of extremely heavy duty use in a rugged fleet operation. Note the smooth, even way it is wearing-in. High unit pressure and narrow land contact, coupled with the long wearing qualities of chrome, impart maximum efficiency and durability.



American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street, Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement Piston Rings



Smart new blue and yellow American Hammered Krome-Oil carton is the quality mark in the automotive piston ring replacement field. Krome-Oil licks your customers' ring problems and increases your profit.

Remember American Hammered Power-Plus Service—Koetherizing • GI-60 Groove Insert • Dry Film Lubricant

Calendar of Coming Events

Dealer Meetings

Sept. 17-19—New Mexico Automotive Dealers Assn., La Fonda Hotel, Santa Fe, New Mexico
 Sept. 20-22—Wyoming Automobile Dealers Assn., Irma Hotel, Cody, Wyo.
 Sept. 20-22—Kentucky Automobile Dealers Assn., Phoenix Hotel, Lexington, Ky.
 Sept. 21-22—Wisconsin Automotive

Trade Assn., Hotel Schroeder, Milwaukee, Wis.

Sept. 21-22—Minnesota Automobile Dealers Assn., St. Paul Hotel, St. Paul, Minn.

Sept. 21-22—South Dakota Automobile Dealers Assn., Aberdeen, S. D.

Sept. 24-25—New Jersey Automotive Trade Assn., Hotel Traymore, Atlantic City, N. J.



SPECIAL SERVICE JOBS THAT PAY OFF FOR YOU

THIS special trailer hitch was easy to make out of angle iron and flat stock using a Lincoln arc welder. The "Lincwelder AC-250-K" enables you to make a good profit while you give special services like this which keep your customers coming back.

"ARC-BOOSTER" FOR EASY ARC STRIKING

The "Lincwelder" has the Arc-Booster, exclusive Lincoln device which prevents electrode striking in AC welding. The continuous current control lets you select the exact current desired by merely turning the control. Any beginner can make good welds with the "Lincwelder AC-250-K".

See your nearby Lincoln Dealer or write for Bulletin 1331. The Lincoln Electric Co., Dept. 4007, Cleveland 17, Ohio.



THE LINCOLN ELECTRIC COMPANY
 Cleveland 17, Ohio

LOOK TO



FOR LEADERSHIP

The World's Largest Manufacturer of Arc Welding Equipment

Sept. 26-29—A.A.D.A., Inc., Arlington Hotel, Hot Springs, Arkansas

Sept. 27-28—Georgia Automobile Dealers Assn., Biltmore Hotel, Atlanta

Sept. 27-29—Arkansas Automobile Dealers Assn., Inc., Convention, Arlington Hotel, Hot Springs, Arkansas

Oct. 2-3—Kansas Motor Car Dealers Assn., Hotel Town House, Kansas City

Oct. 3-5—Arizona Automobile Dealers Assn., Hotel Westward Ho, Phoenix

Oct. 4-6—Texas Automotive Dealers Assn., Texas Hotel, Fort Worth

Oct. 7-9—National Used Car Dealers Assn. convention, Hotel Statler, Detroit

Oct. 9-10—Pennsylvania Automotive Assn., William Penn Hotel, Pgh.

Oct. 11-13—Mississippi Automobile Dealers Assn., Buena Vista Hotel, Biloxi, Miss.

Oct. 13-16—Federation of Automobile Dealers Assn. of Canada, Royal York Hotel, Toronto, Ontario

Oct. 17-19—Arizona Automobile Dealers Assn., Hotel Westward Ho, Phoenix, Ariz.

Oct. 18-20—Tennessee Automotive Assn., Buena Vista Hotel, Biloxi, Miss.

Oct. 22—Connecticut Automotive Trades Assn., Inc., Hotel Bond, Hartford, Conn.

Oct. 25-27—Automobile Dealers Assn. of Alabama, Buena Vista Hotel, Biloxi, Miss.

Oct. 25-27—Florida Automobile Dealers Assn., Sheraton-Beach Hotel, Daytona Beach

Nov. 9-11—Automotive Trade Assn. of Virginia, John Marshall Hotel, Richmond

Nov. 9-11—Ohio Automobile Dealers Assn., Hotel Commodore Perry, Toledo

Nov. 13-14—Montana Automobile Dealers Assn. Convention, Finley Hotel, Butte, Montana

Nov. 18-19—Oklahoma Automobile Dealers Assn., Mayo Hotel, Tulsa

Nov. 30-Dec. 2—Idaho Automobile Dealers Assn., Boise Hotel, Boise.

Dec. 3—Utah Automobile Dealers Assn., Newhouse Hotel, Salt Lake City

Dec. 4—Oregon Automobile Dealers Assn. Convention, Multnomah Hotel, Portland

Automobile Shows

Oct. 10-25—Southwestern Automobile Show, Dallas, Texas.

Feb. 20-28, 1954—Second Annual World Motor Sports Show, Madison Square Garden, New York City

Mar. 13-21, 1954—Chicago Auto Show, International Amphitheater.

Apr. 17-25, 1954—Seattle Auto Show, Seattle Civic Auditorium.

Site and Date Announced For Midwest Trade Show

Completion of plans for the Midwest Automotive Trade Show has been announced by Ralph Silverman, president. The Regional Show will be staged at the Kiel Auditorium in St. Louis, Mo., April 8 through April 11, 1954.

Joseph L. Haenny has been named general manager.

Chilton's MOTOR AGE, SEPTEMBER, 1953

1953 Mobilgas Economy Run Proved Again B-W Overdrive *pays off!*



Top 9 cars (on miles-per-gallon basis) including Sweepstakes winner—
all equipped with this famous Borg-Warner Transmission unit—averaged

25.27 MILES PER GALLON

Again this year the records proved: B-W Overdrive means more miles per gallon of gas!

In the grueling, 1206.1-mile Mobilgas Economy Run—sanctioned and supervised by the Contest Board of the AAA—the 9 best actual miles-per-gallon records were made by 1953-model cars equipped with Borg-Warner Overdrive.

And in every year of this annual contest, the *ton-miles-per-gallon* Sweepstakes winner has been equipped with this famous Borg-Warner transmission unit.

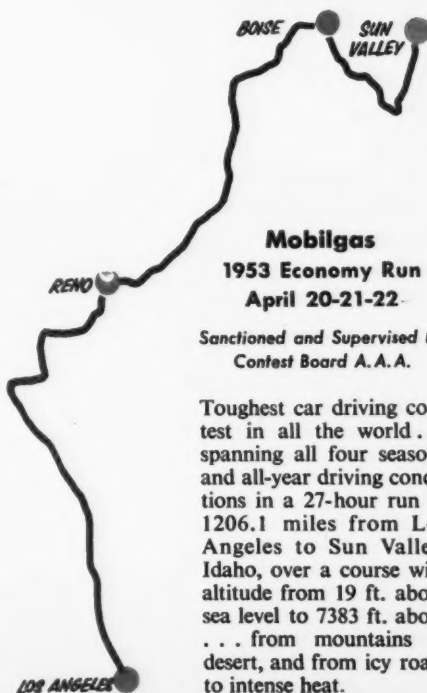
What better proof could you want of real fuel economy!

SAVES GAS—CUTS ENGINE WEAR

An advanced-type transmission, B-W Overdrive automatically cuts engine revolutions 30%. At 50, for instance, the engine is taking it easy at only 35! That saves gas. Saves engine wear, too—means longer life and fewer repair bills.

Made exclusively by B-W's Warner Gear Division, Overdrive is now offered on 13 leading makes of cars. Proof again that... *B-W engineering makes it work—B-W production makes it available.*

Borg-Warner



Mobilgas
1953 Economy Run
April 20-21-22

Sanctioned and Supervised by
Contest Board A. A. A.

Toughest car driving contest in all the world... spanning all four seasons and all-year driving conditions in a 27-hour run of 1206.1 miles from Los Angeles to Sun Valley, Idaho, over a course with altitude from 19 ft. above sea level to 7383 ft. above... from mountains to desert, and from icy roads to intense heat.



THESE UNITS FORM BORG-WARNER, Executive Offices, Chicago: ATKINS SAW • BORG & BECK • BORG-WARNER INTERNATIONAL • BORG-WARNER SERVICE PARTS • CALUMET STEEL • CLEVELAND COMMUTATOR • DETROIT GEAR • FRANKLIN STEEL • INGERSOLL PRODUCTS • INGERSOLL STEEL LONG MANUFACTURING • LONG MANUFACTURING CO. LTD. • MARBON • MARVEL-SCHLEBLER PRODUCTS • MECHANICS UNIVERSAL JOINT • MORSE CHAIN MORSE CHAIN CO. LTD. • NORGE • NORGE HEAT • PESCO PRODUCTS • REFLECTAL • ROCKFORD CLUTCH • SPRING DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO. LTD. • WOOSTER DIVISION



choose

K R Y L O N

Standard of Professionals

LEADING AEROSOL PROTECTIVE COATING

Use Crystal Clear for Moisture-Proofing Ignition Systems • Corrosion-Proofing Batteries and Terminals • Protecting Chrome • Eliminating Static on Seat Covers • Water-Proofing Convertible Tops

Use Aluminum for Blocks

Use Black for Radiators • Repaired Generators and Starters

For quick stopping of windshield leaks use SEALZIT! Both KRYLON and SEALZIT are easy to apply, immediately effective and foolproof.



KRYLON

First to market an acrylic aerosol protective coating.

First national advertiser of an aerosol protective coating.

First choice of professionals.

KRYLON INC.

2038 Washington Avenue, Phila. 46, Pa.

Customer labor has increased greatly. Owners are highly pleased with car operation after Carbon Blast tune-up. Our unit has already paid for itself after six weeks.

George Cianfone, Service Manager
Dahlgard Buick Corp., Flushing L.I., N.Y.

We have two of your "Head-On" Carbon Blasters in our service department. I am very proud to take a customer out in his car after removing the carbon with this machine. We make a very nice profit, and we make our owners happy.

Fred Brown, Service Manager
O'Daniel Ranes, Inc., Evansville, Ind.

We now have two Kent-Moore Carbon Blasters... We estimate these machines have increased our service profits by \$2,000.00 annually

Orbie Woods, Service Manager
Brace Motor Company, Kansas City, Mo.

We have had the Kent-Moore "Head-On" Carbon Blast in operation for a period of eight months and within that time we have increased our customer labor sales to a new high. The Carbon Blaster has paid for itself many times over and has proven to be the biggest profit maker of any piece of equipment in our Service Department.

Bob Massip, Service Manager
Krieger Motor Company, Lodi, California

We used the Carbon Blast machine on one of our customers cars and he was so enthused he came back a few days later to tell us that he had raised his gas mileage two miles more per gallon. This is just one of many satisfied customers out of a hundred we have completed.

Jack Milliron, Service Manager
Baily Buick, Inc., Cleveland, Ohio

The Carbon Blaster is one of the most profitable new equipment items we have purchased for some time. ... could hardly get along without it.

Frank Hull, Service Manager
Ray E. Weaver, Pittsburgh, Pa.

The machine has cut our man hours on each job in half. Our customers are pleased with the work, and our Mechanics are happier since, with the aid of the machine, their pay envelopes are considerably higher.

T. H. Poe, Shop Foreman
Triangle Motors, Dallas, Texas



Here's what users are saying about their "Head-On" Carbon Blasters ... the amazing new machine that "blast-cleans" combustion chambers ... restores "lost" engine power. If you're not equipped to perform this profitable new service get in touch with your nearest Kent-Moore Distributor today!



KENT-MOORE ORGANIZATION, INC.
5-105 GENERAL MOTORS BLDG. • DETROIT 2, MICHIGAN

Profits!

Kent-Moore Organization, Inc.
5-105 General Motors Bldg., Detroit 2, Michigan

Available to all Carbon Blaster owners ... a complete promotional campaign to help you sell Carbon Blast Tune-up! Send for your "Profits" Plan Book today!

NAME _____
COMPANY _____
CITY _____ ZONE _____
STATE _____

Added measure of sales help

Here's what you're looking for!

An advertisement that spells the "sell" in a General Motors car.

For it highlights a specific example of how GM engineering makes a GM car a better buy—dramatically presented by a true-to-life photograph of GM engineering in action and hard-hitting fact-backed copy.

This is the latest of the new series of "Key" campaign advertisements appearing monthly in leading national magazines—usually in double pages in four colors.

packages

tack well in freezer? If you
re packages falling. Also, on
stacks, noting the food con-

minimum 1-2 of freeze water
angular or square containers
in round containers. If you
in important consideration.

er's first fruits and veg

section of stalks to
table; remainder to
white; tender; use
pressure-cook for 10
5. Blanching by steam
flavor and nutrients
Steam-blanch (cover
out up) 3 1/2 minutes
1 1/2 minutes. If you
blanch small stalks
large stalks, 4 minutes
6. Chill 3 to 5 minutes
7. A topsoil peeling
package is best for sale
appears. Any type of
line carton is suitable
vegetable.

Spinnach

A more tender
obtained in spring than
1. Cut when leaves are
tender.
2. Wash thoroughly in
running water to rid leaves
3. Steam-blanching in
greens since leaves are
So water-blanch about
a time for 2 1/2 minutes
4. Drain for 5 minutes
5. Boiling water constantly
nating and assure
ing Cook blanching
time water, reserving
vegetables have been
6. Chill immediately in
cold water for at least 5
7. Squeeze out excess
8. Package in any type of
freezing container.

Peas

Thin as finger is
ity for freezing. From
new variety which
in regions where they
way be difficult to grow
anyday green, large
garden variety was
frozen product.
1. Do not freeze old
Tender, slightly
are better for the freeze
2. Pod 4 or 5 pounds
do not wash after pod
3. Water-blanch about
a time. The time de-
one of pea. Blanch and
4 seconds; large peas, 4
If you prefer to steam
peas, small peas will
large peas, 2 minutes
4. Chill immediately in
running water 3 minutes.
5. Fill any type of freez-
ing container full, and
6. Freeze immediately.
MILITARY HOMES & GARDENS



He measures millionth-inch mountains —to make GM cars a better buy

THERE are many reasons why you get more for your money in any General Motors car you buy—whether it be a Chevrolet, Pontiac, Oldsmobile, Buick or Cadillac.

Take, engines, for example. Long life depends upon perfect matching of their moving parts. Yet smooth as these highly machined surfaces may feel, they are actually ridged with microscopic peaks and valleys as infinitesimal as one-millionth of an inch.

So here you see how GM insures a more perfect match. This production man is using a high-precision electronic instrument called a Surfagage®, developed by GM Research to measure the exact degree of roughness in

crankshafts, pistons, bearings, cylinder walls and other wearing surfaces.

With this unique instrument laboratory-accurate measurements of surface roughness can be made instantly, right on the production line. It gives engineers in every GM production or assembly plant a split-hair check on parts' surfaces, insuring perfect matching.

In the making of very GM car there are literally hundreds of super-precision tests like this on transmissions, bodies and frames, as well as engines, which insure longer wear and smoother performance. That is one of the big reasons why the key to a General Motors car is your key to greater value.

GENERAL MOTORS



Your Key to Greater Value—the Key to a General Motors Car™



CHEVROLET • PONTIAC • OLDSMOBILE • BUICK • CADILLAC • All with Body by Fisher • GMC TRUCK & COACH

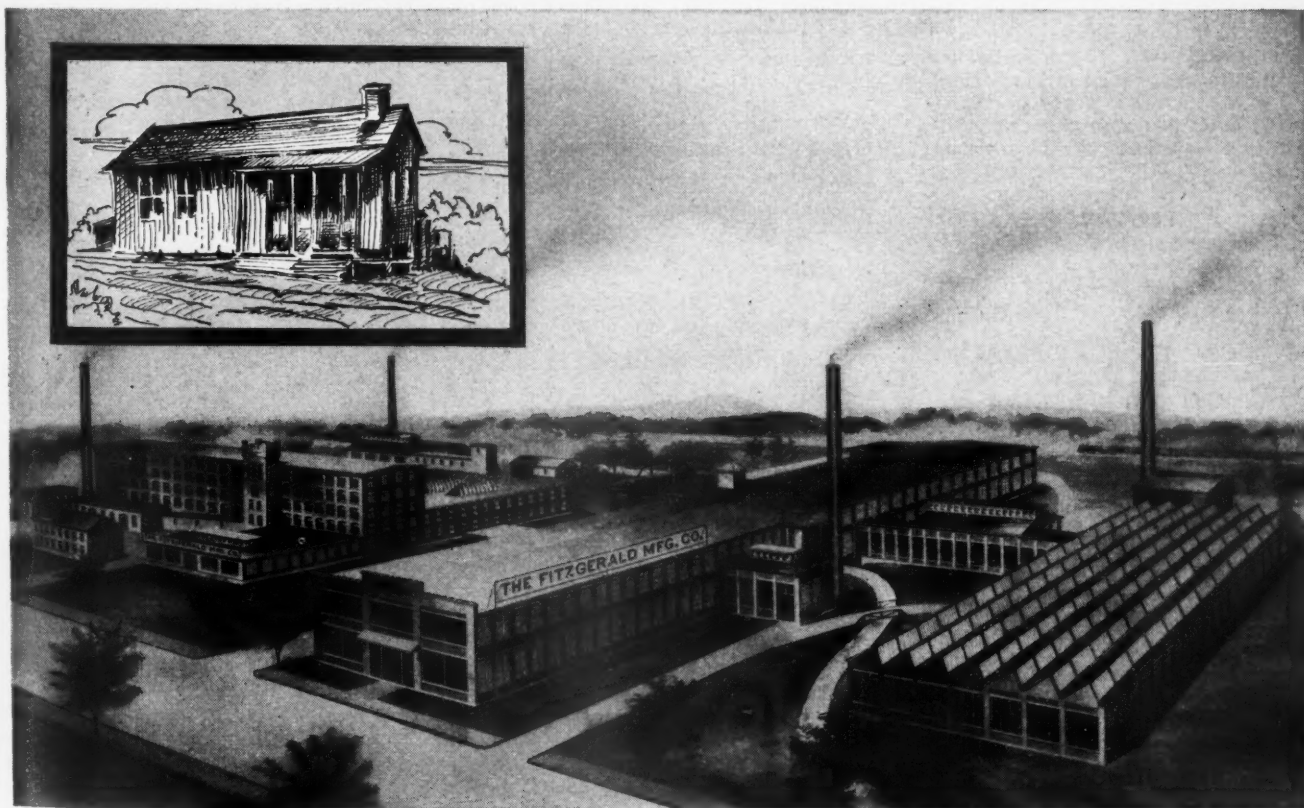
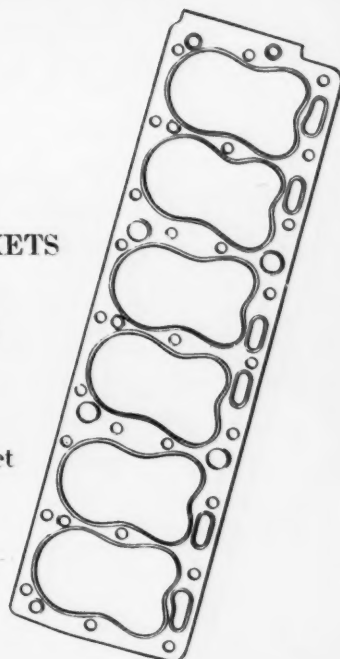
FITZGERALD GASKETS

...Since 1906

FITZGERALD METALLIC ALUMINUM FUSED ASBESTOS GASKETS give you the perfect answer to your need for a perfect, lasting seal against the higher heat and pressures of modern high compression engines. Just as our "log cabin factory" of 1906 has grown to our present plant, so have Fitzgerald Gaskets kept pace with the engineering advances of the automotive industry. A truly complete line, there's a Fitzgerald Gasket for every engine . . . gasoline or diesel.

also...

GREASE RETAINERS • CORK GASKETS FITZ-RITE TREATED FIBRE GASKETS FOR OIL, GASOLINE AND WATER CONNECTIONS COMPLETE SETS FOR MOTOR REBUILDERS



Today's Executive Offices and Present Plant



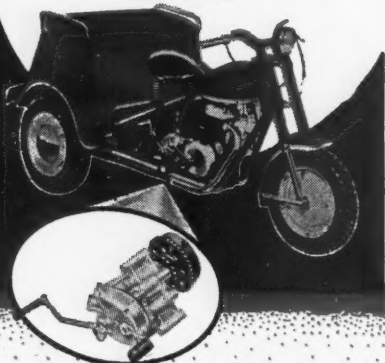
THE FITZGERALD MANUFACTURING COMPANY
TORRINGTON, CONNECTICUT

Canadian FITZGERALD Ltd.—Toronto, Canada
Branch and Warehouse—Los Angeles, California; Chicago, Illinois

new 4 Speed TRANSMISSION

makes the
**MUSTANG
DELIVERCYCLE**

more rugged than ever for
**PICK-UP and DELIVERY
SERVICE**



MUSTANG DELIVERCYCLE'S new 4-speed Burman wide range ratio heavy duty transmission means greater load capacity plus longer life, trouble free performance. The Mustang DELIVERCYCLE offers low operating cost . . . minimum service and replacement . . . low initial investment . . . and most important of all, increased profit. Complete rider control minimizes possibility of accidents and the amazing accelerating power provides easy traffic maneuvering.

PERFORMANCE

MAXIMUM SPEED: 40-45 MPH
POWER OUTPUT: 9.5 H.P.
COMPRESSION RATIO: 6 to 1
GAS MILEAGE: 50 Miles per Gallon

EXCLUSIVE MUSTANG FEATURES

- ✓ load spring suspension
- ✓ shock absorbing telescopic front forks
- ✓ low center of weight for stability

ADJUSTABLE TOW BAR FOR AUTOMOBILE PICK-UP AND DELIVERY



Automobile Dealers
Service Stations
Garages

THE UTILITY OF A BIG MACHINE
AT HALF THE OPERATING COST

For full information on Mustang DELIVERCYCLE "penny-saving" features write

MUSTANG MOTORCYCLE CORP.
635 West Colorado Boulevard
Key: M A Dept. 105. Glendale 4, Calif.

Insurance Inventory . . .

Continued from Page 156

but it was destroyed, so what's the difference?

Insurance agents did a land office business for the next few days. Neighboring garage owners doubled, even tripled the amount of insurance they were carrying. One proprietor was heard to remark, after the Shear fire: "I took out another policy, and then held an inventory. I was astonished at the amount of stock I had on hand. Why, the old policy didn't cover a fraction of its value!"

Said another: "I don't believe repairmen realize the wealth they accumulate, because it's so gradual. You replace an old charger with a new one, get scared there's going to be a shortage and buy twice as many batteries as you need. But whoever thinks of doubling his insurance?"

An insurance agent added: "I know that a businessman who is just starting out hasn't money to throw away. I try to suggest several policies. Buy them as you need them, as you acquire new equipment. That way, the policies are staggered, and come due at different times. Renewing them isn't nearly so painful."

But Shear lost more than his building to the fire. He was fortunate in owning a prosperous salvage business. "But what's happened to the business I used to have?" he asks. "I thought for a while that it was just a general let down in the parts business, but others weren't complaining. I'm beginning to think that my customers lost the habit of coming here, and it's going to take time to get them back."

Shear now has his shop back in full operation, thanks to sympathetic contractors. But he dreads the thought of trying to hire a first class mechanic. The one he had was forced to seek employment elsewhere, and good mechanics are hard to find.

The new building is almost exactly the same as the one he built back in 1945. It's about as fireproof as they come. But he has learned his lesson.

The BEST is now BETTER than ever

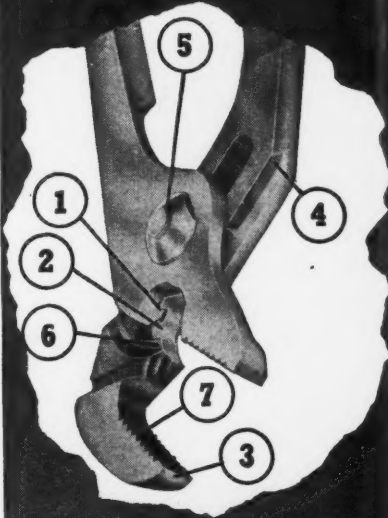
THE NEW No. 420

CHAN NEL LOCK

TRADE MARK

REG. U.S. PAT. OFF.

PLIER



1. Interlocking principle prevents slipping under any load. 2. New type wide base lugs cannot shear. 3. New nose design for gripping small objects. 4. Patented design of tension edge eliminates stress concentration at channels. 5. New interlocking design minimizes stress on joint bolt. 6. Precision machined interlocking surfaces result in perfect fit, distributing pressure evenly. 7. "Rite Angle" teeth guarantee maximum bite and minimum wear.

Here is a plier that will last for years! Channellock Pliers—made only by Champion DeArment Tool Co., Meadville, Pa.

Send for your Catalog today.

Channellock pliers are listed in the Yellow Pages of most Telephone Directories under "Tools"

THE PLIER DESIGN THAT OBSOLETE ALL OTHERS



Only
CHAMPION DeARMENT makes

CHAN NEL LOCK

CHAMPION DeARMENT TOOL CO. • MEADVILLE, PA.

"Without Commercial Credit we couldn't do business"

SAYS MR. A. D. "RED" BURDETTE, President of Burdette Ford Co., successful and aggressive Ford dealer of Meridian, Mississippi.



BURDETTE FORD CO. has grown and prospered since starting business three short years ago. Mr. Burdette has used COMMERCIAL CREDIT PLAN since that time, too, and as his statement shows, he regards it as an essential part of his business.

"Without COMMERCIAL CREDIT we could not do business. They floor plan our new cars and trucks. They make it possible for us to offer extended terms of payment to new and used unit buyers. They enable us to 'budget sell' our parts and service customers. How could anyone want more at so low a cost?"

Experience, resources and complete financing services—these are the things that have inspired dealers, new and old alike, to place such great confidence in COMMERCIAL CREDIT. And these are the benefits available to you. For complete information, get in touch with the nearest COMMERCIAL CREDIT office. And when you do, ask to see "The Salesman's Angle." It's a valuable training aid for salesmen.



**COMMERCIAL
CREDIT
CORPORATION**

A service offered through subsidiaries of
Commercial Credit Company, Baltimore
... Capital and Surplus over \$135,000,000
... offices in principal cities of the United
States and Canada.

**COMMERCIAL CREDIT DEALERS
ARE *Successful* DEALERS**

UTICA'S

NEW RIB-JOINT[®] PLIERS

**FORGED
RIB-JOINT[®]
for extra strength**



**FULL FORGED
RIBS CAN
TAKE IT!**

#507-10"

Full forging of the rib joint is the secret of this new Utica pliers. Forging makes the steel fibre structure follow the contours of the ribs as shown in the diagram below. Hence, each rib shares the sinew-like strength of the entire joint.

Be sure you see these new pliers! One look, one "heft", and you'll know they are "UTICA® quality."

**CROSS SECTION VIEW
SHOWING STEEL FIBRE STRUCTURE
OF FORGED RIBS**



STRONG BECAUSE STEEL FIBRE STRUCTURE IS COMPRESSED AND FORCED TO FOLLOW CONTOUR OF RIBS

IT PAYS TO USE QUALITY TOOLS
and the world's best tools are made in U.S.A.



In Canada
ADLAM TOOL & SUPPLY CO., LTD., MONTREAL,
WALLS-IRONS, LTD., WINNIPEG

Engineering Highlights

Continued from Page 148

other words, it becomes harder to fire and sometimes, particularly at high speeds, the spark fails to jump the gap.

That's why in 1953 some makes had to resort to 12-volt electrical systems. With the 12-volt system you get a hotter spark and sufficiently more voltage so the spark can jump the gap without difficulty at all times. More recently, some of the experts have come up with some ideas that may make it possible to do the same thing with revised 6-volt systems. What they come up with may be well worth noting when the time comes.

Barrett Releases Slide Film on Brake Service

An eighty-five slide film on the subject of brake service has been released by Barrett Equipment Company. It explains Barrett's cooperation in highway safety programs and the tremendous market which lies in brake service. A major point brought out in the film is the need for educating the public on the idea of having periodic brake inspection and service on a mileage basis. "The well-equipped shop gets the business" is demonstrated in the Barrett film, and there are charts with figures to prove the point. Aids for brake servicemen offered by Barrett are described briefly, and the film closes with a discussion on dealer training programs already in progress, indicating how important dealers consider the problem of proper brake service.



Jim Blinn
Denver, Col.
says . . .

IT'S YOUR BUSINESS

. . . or is it?

SEE PAGES 104-105

**EASIER
to Handle!**

WIREMOLD DEFROSTER HOSE



**SAVE TIME!
Build PROFITS!**

- ▶ Fits every make and model of car or truck
- ▶ Specified equipment on most makes of cars
- ▶ Easily bends 90° — 180°
- ▶ Resists cold—heat—oil—water
- ▶ Saves 50% storage space 6' lengths retract to 3' in package
- ▶ Wiremold quality at a competitive price

Wiremold can be bent double without kinking . . . has unusual adaptability for exhaust and ventilating applications. Performance-proved in automotive and industrial fields! Write today for full information — ask us to show you what Wiremold will do for you!

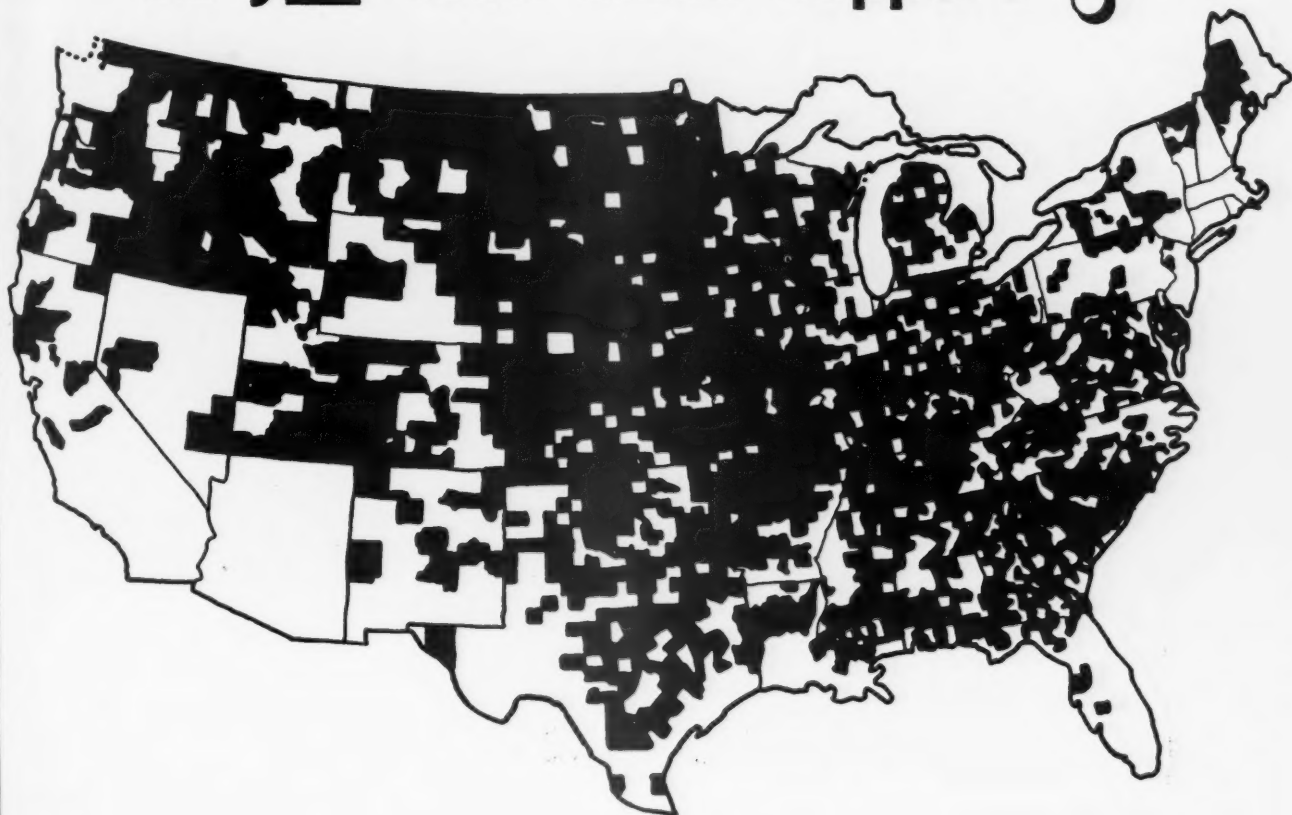
SPECIFY WIREMOLD
get the **BEST**
at **NO EXTRA COST!**

The **WIREMOLD** Company

Makers of Wiremold Electrical Systems

Hartford 10, Connecticut

Where on this map do you need sales support ?



There are 3,071 U. S. counties, and in the 1,985 shaded ones more families are reached by Country Gentleman than by the nation's largest women's magazine, Ladies' Home Journal.

In fact, in nearly 2 out of 3 counties Country Gentleman has more circulation than *any* weekly, women's or home service magazine!

In *every* county, wherever you have customers, the Journal will sell your best *city* families . . . Country Gentleman will sell your best *rural* customers.

You are getting powerful selling support—right in your local trading area—when a manufacturer advertises in Country Gentleman. Isn't that the kind of advertising help you want?

*Sells your best rural customers...
the customers other magazines miss*

CIRCULATION NOW OVER 2,500,000

A CURTIS PUBLICATION



HOLD TIGHT

and
pappy's happy!



Everybody's happy about *"Aero-Seal"* **HOSE CLAMPS**

... because they never let go ... always hold tight, can't snap open. No other clamp equals AERO-SEAL, with its stainless steel band and precision worm gear drive that locks tightly, exerts pressure evenly all around the hose, without pinching or damaging. Installed in seconds, quickly removable for use again and again. Like all BETTER products, AERO-SEALS are easier to sell, make better profits. Feature the assortments. Make money.

Set your your local jobber



Who's Who

R. S. McNamara and A. R. Miller have been appointed to the positions of assistant general manager and controller, respectively, of the Ford Division of the Ford Motor Company.

Four executives of Willys Motor Company have been given new positions under the combined automotive divisions of Willys Motors and Kaiser Motors. They are: George L. Palmer, director of finance; George J. Edellstein, director of purchasing; Henry C. McCaslin, director of manufacturing-engineering; and Marden R. Bishop, director of public relations.

Ray E. Markusen has been elected automotive director of the Upholstery Leather Group, Inc.

C. J. Jefferson has been selected for the newly created post of training coordinator of the Dodge Division of the Chrysler Corporation.

T. Jack Henry has been appointed advertising manager of the Lincoln-Mercury Division, it was announced by the Ford Motor Company.

J. W. Dunn and H. R. Voorhees have recently been named assistant chief engineers for the Chrysler Corporation's Engineering Division.

Grover C. Page was elected sales council manager of the sales training department of the Lincoln-Mercury Division.

W. W. Sugg has been promoted to the position of regional manager of the Chrysler Division at Memphis.

W. T. Wright has been appointed special assistant to the president of the Pacific Coast territory of the Chrysler Division.

A. E. Cleaveland has become the regional manager at Boston for the Plymouth Motor Corporation, with a territory including Massachusetts, Maine, Vermont, New Hampshire, Rhode Island and part of Connecticut.

K. G. Pound was selected by the Plymouth Motor Corporation for the new position of sales administrative executive.

No Other Parts Cleaner Has All These Features!



✓ **SAFE ON HANDS**

✓ **FAST-ACTING**

✓ **NO UNPLEASANT ODOR**

✓ **SAFE ON ALL METALS**
(including aluminum and magnesium)

✓ **LESS EXPENSIVE**

Petisol 202

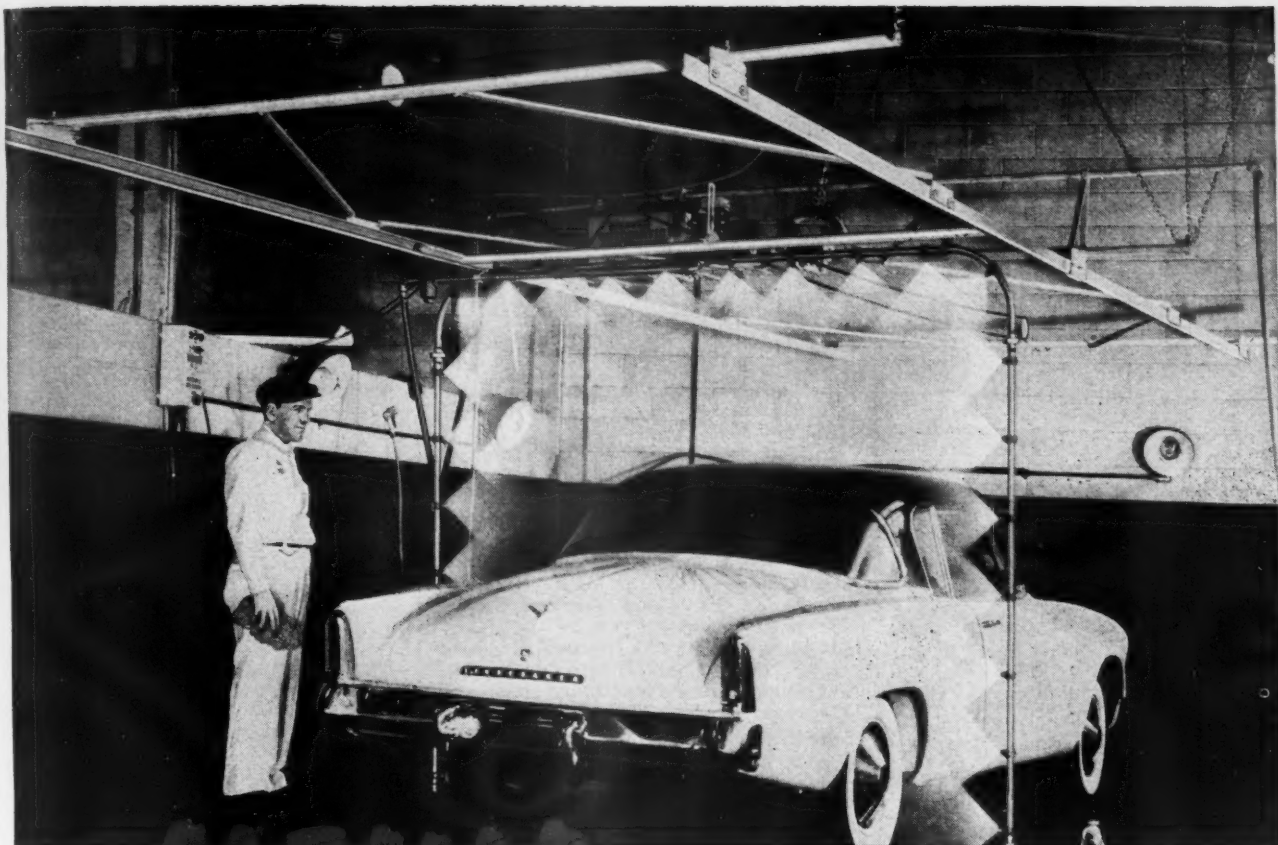
Carburetor and Metal Cleaner

Manufactured by the makers of world-famous
SILOO PRODUCTS

PETROLEUM SOLVENTS CORPORATION

331 Madison Avenue • New York 17,

In Canada — 2491 St. Patrick St. — Montreal



NEW! **WEAVER** automatic **OVER HEAD CAR WASHER**

**quickly gives a thorough wash, with 4 rinses
...yet uses less than 15 gallons of water**

You gain these important features with a Weaver Automatic Car Washer.

1. **AUTOMATIC CYCLING INCREASES PRODUCTION**
2. **NO BOOTS OR APRONS NEEDED.** No excessive misting or splashing
3. **EXCLUSIVE Non-Corrosive "Spray Arch"** contains clog-resistant nozzles — dispenses both the detergent and water at constant pressure.
4. **USES LESS WATER** — less than 15 gallons required for a complete wash — approximately one-half as much as some others. Does not require large inlet pipes or storage tanks.
5. **USES LESS DETERGENT** — only ¼ to ½ ounce of

"Weaver-Gloss" detergent needed per job. Washer automatically shuts off detergent during rinsing cycle. Gives 4 Clear-Water Rinses. Stops automatically.

6. **HANGS FROM CEILING** — leaving floor space unobstructed for other services when washer is not in use.
7. **EASY ON ELECTRICITY** — the power used is so slight that the ordinary 110-volt wall outlet is adequate.
8. **"SPRAY ARCH" MADE OF ALUMINUM.**
9. **MODERATELY PRICED** — only \$825.00 complete.

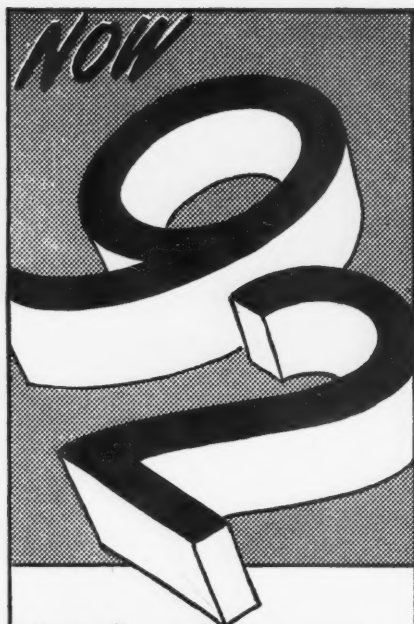
For additional information, consult your Weaver jobber or write us for Bulletin MA-710

WEAVER

Weaver Manufacturing Co., Springfield, Illinois, U. S. A.

SERVICE SHOP EQUIPMENT

Complete line includes—Twin Post Lifts..Unit Lifts..Wheel Alignment Equipment..Headlight Testers
..Brake Testers..Wheel Balancing Equipment..Jacks..Wheel Dollies..Car Washers..Air Compressors.



WATER PUMPS

*including
all 1953
Popular Cars*

HUNDREDS
of good parts
in the Wohlert
line for nearly
every repair job
requirement--

Wohlert
Corporation
LANSING 5 MICHIGAN



An "Oscar for Safety"

A "Safety Oscar" is presented to W. F. Hufstader, vice-president, General Motors Corp., and chairman, Inter-Industry Highway Safety Committee (right), by the Honorable Alfred P. Murrah, U. S. Court of Appeals, and chairman, National Committee for Traffic Safety (left). Frederick J. Bell, executive vice-president, National Automobile Dealers Assn. (center) looks on. The award, received for the third consecutive year by the Inter-Industry Committee, honors the work of automotive and allied industry dealers cooperating in national state, and local activities to combat traffic accidents.

Philadelphia Automotive Accountants Name Officers

An organization consisting of accountants from the various automobile dealers in the Philadelphia area has named its officers for the coming season. They are as follows: President, Robert B. Monson, Evans Chevrolet; Vice President Paul J. Bates, Elion Motors; Treasurer, Eleanore Gash, Becker-Mills, Inc.; Recording Secretary Leah B. Calvert, Bryner Chevrolet; and Corresponding Secretary, Elsie Tschopp, J. Jack Fisher, Inc.

The organization has regular meetings with speakers from various fields to discuss subjects pertaining to the automotive business from the accountant's viewpoint.

Classified Advertisements

MANUFACTURER'S AGENT TRAVELING OKLAHOMA, ARKANSAS AND KANSAS WANTS ADDITIONAL AUTOMOTIVE AND ACCESSORY LINES IN THOSE STATES. JOHN R. ELK, JR., 100 ELMWOOD ST., PONCA CITY, OKLAHOMA.

LINES WANTED—Manufacturer's representative needs additional lines. Complete coverage automotive jobbers, chains, etc. Penn., Md., Del., and D. C. Box No. 24, Motor Age, Chestnut & 56th Sts., Philadelphia 39, Pa.

Time Savers...
KEN TIRE CHANGING TOOLS
...they're "Job Designed"

T-70 SET
T-22 T-5 T-21
T-28
T-27
T-18
T-23
T-20
T-19A
T-48
T-25 New Ford Tire Tool
T-50
T-52
T-10
T-26

KEN-TOOLS are hand forged from chrome nickel alloy steel...heat treated for extra long life...Best By Actual Test!

KEN-TOOL...
LARGEST EXCLUSIVE MAKERS OF TIRE AND WHEEL CHANGING TOOLS

See Your Local Jobber for Our Complete Line
The KEN-TOOL Mfg. Co.
Akron 5, Ohio



Johnny Martin
Philadelphia, Pa.
says . . .

IT'S YOUR BUSINESS
. . . or is it?
SEE PAGES 104-105

WEED

**SELL · SERVICE ·
· REPAIR ·
TIRE CHAINS**

**Always Recommend
WEED AMERICAN
V BAR-REINFORCED**

The Best Buy in

TIRE CHAINS



**WOLF'S HEAD
MOTOR OIL**

Provides all three:

**100% PURE PENNSYLVANIA
SPECIALLY REFINED
SCIENTIFICALLY FORTIFIED**



THICK BLOCKS

AXLE GROUPS

COMPLETE CAR SETS

American Brakeblok
THE SAFETY BRAKE LINING

PRIMARY

**We've added
another plus
to increase your business**

Protect your reputation

INSTALL

**American
BIG U.S. PAT. OFF.
Brakeblok**

THE SAFETY BRAKE LINING

**AMERICAN
Brake Shoe
COMPANY**

Exchange brake shoes—bonded with genuine American Brakeblok! At your Jobber's now! Provide your customers with the safe stops, the long life, the dependable performance for which American Brakeblok is famous . . . and, at the same time, cut installation time, deliver jobs faster, increase your profits.

And to this add the unsurpassed acceptance of American Brakeblok thick blocks and axle groups in the bus and truck field; our complete coverage of passenger cars, foreign and domestic; and you see why American Brakeblok is the profitable answer to your brake lining needs.

Make American Brakeblok *your* number one line. Call your nearby N. A. P. A. Jobber today.

Copyright 1953, American Brake Shoe Company



AMERICAN BRAKEBLOK DIVISION
DETROIT 9, MICHIGAN

Plants in: Detroit, Michigan; Winchester, Virginia; Lindsay, Ontario; Gif, France

Soundmaster FITS

... NOT 1,
NOT 2, BUT
ALL 3 WAYS!



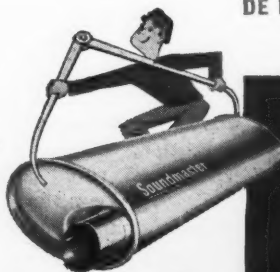
1 HORSEPOWER FIT

For every engine, there is an established, correct back pressure limit. Excessive back pressure above that level steals power, wastes gas, leads to sludging and engine re-

pairs. That's why each Soundmaster Muffler is engineered for correct back pressure on each specific make and model—never above the accepted limit—for all the power the car can deliver!

2 MECHANICAL FIT

Length, size and shape of shell . . . size and location of inlet and outlet . . . all are engineered specifically for a particular car. Result: Soundmaster mechanical fit spells Fast Installation Time—more profit on every job.



DE KOVEN MANUFACTURING COMPANY • RACINE, WIS.

3 ACOUSTICAL FIT

Soundmaster Mufflers are engineered to control not only total exhaust noise on a given car, but also the individual, irritating sounds which occur at different speeds and loads. Result: "full-range" noise control!



Soundmaster

MUFFLERS FIT
ALL 3 WAYS!

with Monmouth* "Extraordinary Performance is Routine"

This Monmouth SCLA
Main Bearing after 149,000
miles is in perfect condition.



"No bearing failures" in four years and millions of miles of operation reports a large passenger transit company using Monmouth SCLA Bearings. "We only put in new bearings during a general overhaul made necessary by failure of other parts."

Here is another of the many reports of extraordinary performance of Monmouth

Bearings which we have on file.

This performance means real economy to the truck and bus fleet operator. This same performance, of course, means satisfaction to the private passenger car owner. For replacement, specify Monmouth Engine Bearings of the type called for by vehicle makers' specifications—distributed exclusively by NAPA Jobbers.

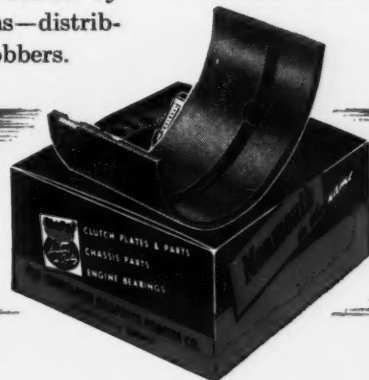
*Your
NAPA Jobber
is a Good Man
to Know!*



*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation.

Monmouth

ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS



Supplied through Clevite Service, Inc. Made by The Cleveland Graphite Bronze Co.
Units of Clevite Corporation, Cleveland, Ohio.

***“National security
is impossible
without financial security
of individual citizens...”***



FRED MAYTAG

The Maytag Company

“Ingenious research and the ability to produce . . . which have helped to make the United States the world’s greatest nation . . . could not have been realized without the savings of millions of thrifty persons. Savings of individuals financed new inventions, developed others. The Payroll Savings Plan for purchasing Savings Bonds regularly provides an easier way for American workers to save for future spending or investment, for their own security, and for their nation’s security. Our experience at the Maytag Company has shown us that a successful Payroll Savings program can be the foundation and the cornerstone of happy employee relations.”

Let’s point up Mr. Maytag’s concise summary of the Payroll Savings Plan with a few very recent figures:

- at the close of February, 1953, the *cash value* of Series E Bonds held by *individuals* reached a new high: \$35.5 billion. This is \$1 billion more than the value of the Bonds held on May 1, 1951, when E Bonds began to mature.
- to this encouraging reservoir of future purchasing power, 8,000,000 Payroll Savers are adding \$160,000,000 per month by their consistent investment in U.S. Savings Bonds.
- unit sales of E Bonds in 1952 reached the highest level of the past six years—more than 77 million individual pieces. Of the 77 million units, 67 million were

in the \$25 and \$50 denominations—the bonds bought chiefly by Payroll Savers.

- Payroll Savers are serious savers—of the approximately \$6 billion Series E Bonds which had become due up to the end of March, \$4.5 billion, or 75%, were retained by their owners beyond maturity.

If you are not among the 45,000 companies that make the benefits of the Payroll Savings Plan available to their employees . . . or if you do have a Plan and your employee participation is less than 50%, a telegram or letter to Savings Bond Division, U.S. Treasury Department, Washington Building, Washington, D. C., will bring you all the information and assistance needed to build a *good* Payroll Savings Plan.

The United States Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

MOTOR AGE





Precision Pin Fitting Now As Simple As

A

This dial sets the honing stone for hole size.

B

This dial tells you when to stop honing and gage the hole.

C

This dial tells you when the fit is exactly right.

Sunnen Model LBA-666
with new Precision
Clearance Gage,
and complete with
mandrels for range
.720"—1.020".
Mandrels available for
range .370"—2.625".
Range of gage is
.720"—7 $\frac{11}{16}$ ".



There's no hocus pocus about precision pin fitting—now it really is as simple as A-B-C! Anyone can fit pins to within a "tenth" *and know the exact pin clearance!* And today's high speed, high compression engines require greater precision than ever before.

The Best Test is a Demonstration . . . Ask for it



SUNNEN PRODUCTS COMPANY

7918 Manchester Avenue, St. Louis 17, Missouri

Canadian Factory: Chatham, Ontario

HERE ARE MORE CHAMP-ITEMS TROUBLE SHOOTERS TO SPEED UP REPAIRS

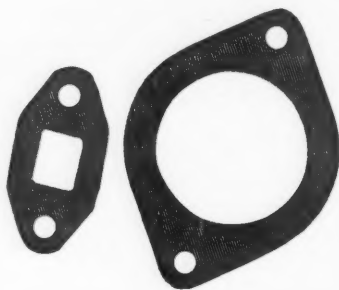


➤ **No. 444 GEARSHIFT LEVER BUSHING ASSORTMENT** for most popular cars for past fifteen years. Assortment consists of 68 large and small insulator bushings, made of fibre to replace the standard rubber bushings. Not affected by oil or grease. Each unit packed in cellophane bag and marked for easy identification.

List 20¢ each.

➤ **No. 647 FUEL PUMP BOWL AND CYLINDER MOUNTING GASKET ASSORTMENT** for popular makes of cars. (See catalog for specifications). Contains 120 gaskets.

List 4¢ each.

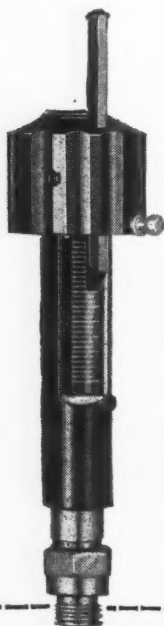


Champ-Items Shop Assortments are popular the world over. If you need trouble shooters to lick a service problem, consult your Champ-Items Catalog No. 53. If you haven't a copy, send for one gratis today.

ORDER FROM
YOUR JOBBER



CHAMP-ITEMS, INC.



We Need Salesmen for TIME-RITE

Special Offer — a \$29.50 Time-Rite on 30 day trial for \$19.47 and the name and address of a good tool salesman.

Time-Rite is the only means of timing the spark with the actual position of the piston—No Timing Marks Used—checks general condition of ignition system.

TIME-RITE CO. 140 Darst Road, Ferguson 21, Mo.

Please send me one Time-Rite for \$19.47 (which I can return at end of 30 days for full refund or credit if not satisfied.) Here is the name and address of a good tool salesman.

MY NAME
STREET
CITY STATE
TOOL SALESMAN'S NAME
ADDRESS

FIND OUT HOW EASY IT IS TO GET RID OF GAS FUMES WITH A TESTED AND APPROVED

National SYSTEM



ACTUALLY COST LESS!



- 6 SYSTEMS TO SUIT YOUR NEEDS
- BOTH OVERHEAD AND UNDER-FLOOR
- FOR PRESENT BUILDINGS OR NEW CONSTRUCTION
- COMPLETE — NOTHING ELSE TO BUY
- GUARANTEED IN WRITING

Designed and engineered to meet your exact requirements. Overhead systems are priced from \$206.25, depending on the number of inlets. Every "NATIONAL" System is complete with motor and blower unit, necessary ducts, tubes and car service extensions to carry exhaust gas from car tailpipe to outside of building. There is a qualified "NATIONAL" man near you.

"NATIONAL" invites you to write for free literature. There is no obligation.

The NATIONAL SYSTEM OF GARAGE VENTILATION INC.

World's Largest Manufacturer of Exclusive Garage Ventilating Equipment

Dept. 404, 330 North Church Street, Decatur, Illinois



Car manufacturers say it...
Brake lining companies say it...
Lube stations say it...
Fleet mechanics say it...

"Whenever you take out an oil seal,
always replace it with a new one..."

Why lose time getting parts? National Service Stocks insure the right seals on hand, when, where needed. Jobber keeps stock up—no work for you. Cabinet comes with the deal. Ask your jobber for complete information.

Service stocks to fit your needs:



#5512. For lube stations. 58 popular front wheel seals.



#5511. For garages. 114 fast-moving front, rear seals.



Support this industry wide program.



...and be sure the new seal is a National! You give the best service when you install new National seals. You're following recommendations of car manufacturers, brake lining companies, station operators and fleet men. They know *their* parts operate best when protected best—by new oil seals. Give professional service, make extra profit at no extra work. Replace with new National seals—every time!

NATIONAL MOTOR BEARING CO., INC.

General Offices: Redwood City, Calif. Plants: Redwood City, Calif.; Van Wert, Ohio

NATIONAL

OIL & GREASE SEALS

O-RINGS SHIMS



Approved original equipment for all cars, trucks, buses and tractors.



This Key Operates

Climate

the most sensational selling feature
ever offered to help you increase battery profits!

THESE ADDED EXTRA FEATURES WILL MAKE WILLARD WEATHERMASTER THE MOST WANTED BATTERY EVER BUILT

NEW one-piece top

Sealed around, not inside, the case. Eliminates exposed sealing compound and cracks due to extreme temperatures or excessive vibration . . . greatly strengthens case. Standard hold-downs distribute pressure over entire battery—not just the case—and hold it tightly and firmly. New improved cushion post seal absorbs shock and vibration, prevents cover breakage during installation. Snap-in shields over top connectors keep battery cleaner, reduce possibility of dangerous shorts.

NEW mechanical separators

Impervious to effects of high charging rate and high under-the-hood temperatures . . . will not oxidize or char . . . eliminate battery shorts caused by gradual physical breakdown of ordinary insulator material. Prevent buckled plate shorts and premature separator failures that can result in customer dissatisfaction and trouble for you.

NEW Metalex grids

Metalex—the vastly superior grid metal, originally developed and introduced by Willard—now has been further improved through perfection of a new Willard grid design. It provides 100% more protection against the No. 1 battery killer—OVERCHARGING.

NEW stronger case

Weighs less than half as much, yet affords twice the impact resistance of previously-used case materials. New thinner wall design permits 12% increase in electrolyte volume without increase in outside case dimensions. Unaffected by temperature extremes. Will stand up under unusually severe conditions of vibration and road shock without cracking or breaking.

NEW all-weather performance

Best for hot weather! Best for cold weather! With Willard Climate Control, you give your customers two best batteries *all in one*—a low-gravity, long-wearing hot weather battery, and a high-gravity, quick-starting cold weather battery. By actual test, the all-new Willard WEATHERMASTER delivers 20% greater starting power at cold weather setting.

GENUINE Willard Safety-Fill

Simplest, safest and most accurate principle ever developed to prevent overfilling and the resulting acid spray which can cause dangerous corrosion. Just cover the patented vent holes and add water until it reaches the top of the opening. Safety-Fill does the rest. No flashlight needed to service the WEATHERMASTER.

Beginning in September

Car owners in every city and town in the country will be reading and talking about the first and only battery in the world with *key-operated*

CLIMATE CONTROL . . .

they will be asking to see this amazing new battery. Be sure you're ready!

NOW'S THE TIME to get set for those extra 1953 battery profits! Call your Willard Distributor!

MAIL THIS COUPON NOW . . .
GET YOUR KEY BEFORE IT'S TOO LATE!

WILLARD STORAGE BATTERY COMPANY
1220 Huron Road
Cleveland 15, Ohio

Send me the key at no charge so I'll be ready to service the all-new Willard Weathermaster.

Name _____
Address _____
City _____ State _____

Control

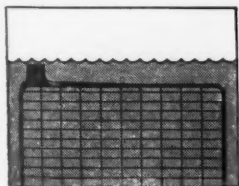
... AN EXCLUSIVE FEATURE OF THE ALL-NEW

Willard Weathermaster

A TURN OF

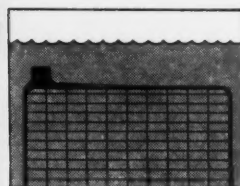
THIS KEY

IN THE FALL...
ADDS EXTRA POWER
FOR COLD WEATHER
STARTING



Low water level increases acid gravity... steps up strength of electrolyte... gives 20% extra cranking power for quick, positive starting at sub-zero temperatures.

IN THE SPRING...
ADDS EXTRA LIFE
FOR HOT WEATHER
DRIVING

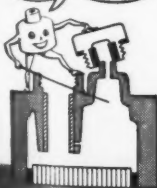


High water level reduces acid gravity... keeps battery cooler. Less possibility of damage from overcharging... less self-discharge due to high temperatures. Needs water only twice a year under normal driving conditions, with correct regulator setting.

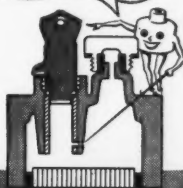


HERE'S HOW WILLARD CLIMATE CONTROL WORKS

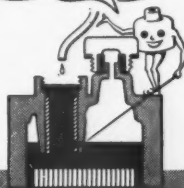
PLACING THIS CAP ON THE SAFETY-FILL VENT FORMS AN AIR LOCK UNDER THE VENT DOME THAT THE SOLUTION CANNOT FILL



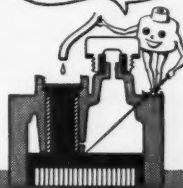
INSERTING THE KEY IN THE CLIMATE CONTROL AND TURNING IT OPENS UP THIS AIR HOLE IN THE SUMMER POSITION, CLOSING IT IN THE WINTER POSITION



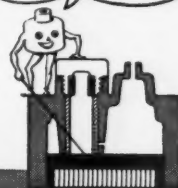
IN SUMMER POSITION WITH THE AIR HOLE OPEN, SOLUTION RISES TO AIR HOLE BEFORE AIR LOCK CAUSES IT TO RISE IN THE FILLER WELL-INDICATING SUFFICIENT WATER HAS BEEN ADDED



IN WINTER POSITION WITH AIR HOLE CLOSED, SOLUTION RISES ONLY TO BOTTOM OF FILLER WELL, THEN RISES IN FILLER WELL TO INDICATE SUFFICIENT WATER HAS BEEN ADDED



REMOVING CAP FROM SAFETY-FILL VENT BREAKS THE AIR LOCK AND THE SOLUTION FALLS TO CORRECT LEVEL. SET CLIMATE CONTROL PROPERLY IN SPRING AND FALL AND ADD PURE WATER FOR EXTRA STARTING POWER IN WINTER AND EXTRA LONG LIFE IN ALL SEASONS





GENUINE P&D PARTS
REG. U.S. PAT. OFF.

VOLTAGE REGULATORS
DISTRIBUTOR CAPS
FUEL PUMPS
RELAYS & CUT-OUTS

P&D Manufacturing Co., Inc.
Established 1920
19-02 Steinway St., Long Island City 5, N. Y.

you cannot buy better products

The Best Move Is To Buy P&D

How MILEY GIVES YOU A 3-WAY BETTER DEAL on Bonded Linings

1. MILEY IS THE ONLY SYSTEM USING an UNCURED lining to insure a closer tighter fit; with no squeaks, no crumbling of lining—the bonding and final CURING is done at the same time—the lining is NEVER overbaked.
2. MILEY BLACK GOLD "POLICE TESTED" BRAKE LINING IS made to resist oil, grease, brake fluids and moisture. Its 70% metallic base, with low content of asbestos and fibre, will not score brake drums, gives a quicker, surer stop with longer mileage.
3. MILEY MAKES ITS OWN BRAKE SHOES—to insure absolute accuracy and quality control.

This 3-way combination is your guarantee of quality bonding—don't settle for less—remember

MILEYBOND IS YOUR BOND FOR SAFETY—SATISFACTION

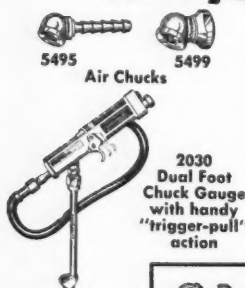
Miley Jobbers everywhere will supply you with Mileybond Brake Shoes—with greater profit at less cost to you. Call one of them today.

L. J. MILEY CO.

Manufacturers of Brake Lining, Brake Shoes, Re-built Cylinders
18 S. SANGAMON • CHICAGO 7, ILLINOIS



Turn your airlines into profit lines!



Be sure your air service is quick, positive and damage-proof to tire valves—use Schrader Air Chucks and other airline fittings to provide high speed air flow and trouble-free service.

Schrader

See our ad

on page 109

A. SCHRADER'S SON, BROOKLYN 38, N. Y.
Division of Scovill Manufacturing Company, Incorporated

"Also in the purchase of new equipment and tools MOTOR AGE

has been a big help, as we know practically all of the most reliable manufacturers are represented in Motor Age. We can keep well posted on their products and be in a position to make the best buys in this way."

The above, of course, is taken from a letter written to us by a MOTOR AGE subscriber. He is typical of thousands of other Motor Age subscribers in that he uses this leading automotive service magazine as a buying guide.

MOTOR AGE

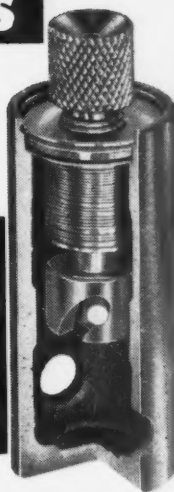
A CHILTON publication

Chestnut and 56th Sts. Philadelphia 39, Pa.

GET THE FACTS

and you'll
STOP
POURING
DOLLARS
DOWN
YOUR
EXHAUST
PIPE

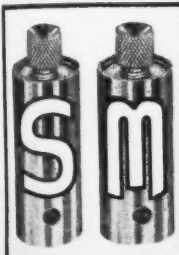
THE
FACTS
ARE
THAT



S-M AUTOMATIC MECHANICAL Self-Adjusting TAPPETS

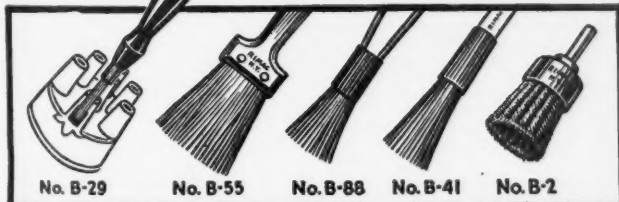
SM Automatic Mechanical Tappets will assure proper valve timing without readjustment for thousands of miles. Combustion is better, saving on gas. Power is increased and maintained. Noise and hammer kept to a minimum.

These facts are proved by the records. Find out yourself . . . you'll be time, money and pleasure ahead. Write Dept. M-9.

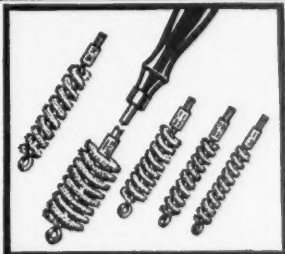


SKINNER-MOSER SALES Dunedin, Florida

A complete stock of LONG LIFE WIRE BRUSHES from RIMAC



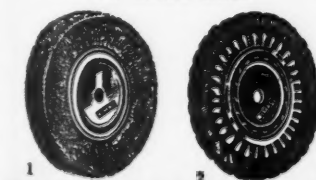
- No. B-29 Distributor Head Brush. Quickly cleans and dresses distributor head sockets.
- No. B-55 Buck Brush. Metal Handles. Excellent for cleaning small parts.
- No. B-88 "Utility" Wire Brushes. Ideal for cleaning battery terminals and removing solder, chips, filings, etc.
- No. B-41 Parts Cleaning Brush. Pig Bristles set in Rubber. Does not collapse in water, oil or gasoline. No metal-no sparks.
- No. B-2 Rotary Wire Brush for use with electric drills.



Valve Guide Brushes. Interchangeable and economical. Five sizes handle 90% of passenger cars and light trucks.

- Over all length 11".
- 1—"Heavy Duty" Wire Wheel Brush.
- 2—"Spiral Twist" Wire Wheel Brush Sections.

See your jobber or Write us.



RINCK-McILWAINE, INC. 16 Hudson Street, New York, N. Y.

SOLATONE ANTI-CARBON UNIT

**ELIMINATES CARBON
IN THE ENGINE!
REDUCES WEAR!
IMPROVES COMBUSTION**



\$12.95

SOLATONE is not a filter...not a solvent, it is a catalyser which disperses carbon and gum deposits and renders them non-abrasive and non-adhesive. SOLATONE is a positive preventive of abrasive formation.

SO EASY TO INSTALL!

...on both fuel line and oil lubricating systems of all types of engines.



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FOR FREE
SOLATONE
CATALOG!**

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HERE'S WHAT USERS SAY:

"... SOLATONE anti-carbon is a necessity for modern high compression engines..."

Racing Equipment Co.*

"...head cylinders, pistons and rings remarkably clean..."

Leading Engine Manufacturer*

"...SOLATONE units are all you claim and more..."

Racing Car Company*

"...SOLATONE installed on my car produced outstanding results..."

Leading Oil Filter

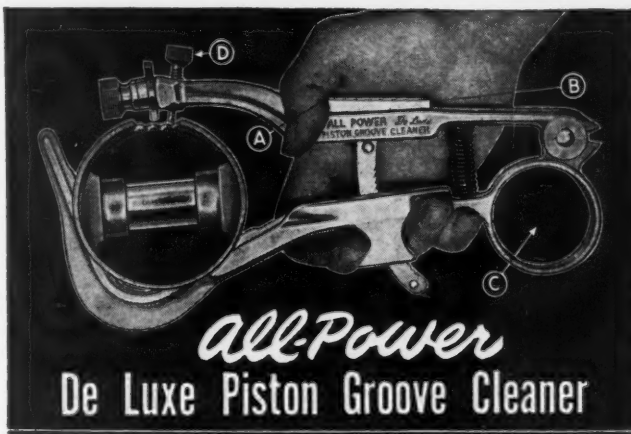
Manufacturer*

"...this process is a remarkable new advance in modern technology..."

Chemical Engineer*

*Excerpts from letters in our files.

A. B. HYDROCARBON SYSTEMS
2808 McKinney Ave. Dallas, Texas



all-Power
De Luxe Piston Groove Cleaner

THE NEW 1953 MODEL
services the new 5/64 ring grooves.

OPERATION — The locking principle is quickly executed and positive. No back slipping. The large ring at "C" for inserting the finger in revolving the tool. Pressure at "A" locks the tool. Pressure at "B" releases it. Ring Groove Set Screw, letter "D" prevents cutter blade from dropping into large oil holes or slots in the ring groove. No other groove cleaner compares in its mechanical advantages.

CUTTER BLADE—The quick-setting, self-aligning, large, five-prong cutter blade feature permitting quick operation in adjusting to the ring-groove widths.

SERVICES RING GROOVE WIDTHS
5/64" to 3/16" & Piston Sizes 2 1/2" to 5".



Stocked by all leading jobbers

ALL-POWER MANUFACTURING CO.
400 ROOSEVELT AVENUE, MONTEBELLO, CALIF.

"FIX-A-BEAM"
FOLDING TRIPOD
FLASHLIGHT HOLDER

Now Available — and to fill a long established need, this outstanding device that puts legs on a flashlight. A tripod holder that folds completely when not in use — fits in pocket — tool box — tackle box, or glove compartment without detaching from flashlight. Rapid adjustment to all angles.

Exceptional item for thousands of uses — frees both hands for maintenance work, mechanics, campers, fishermen. Attractive display box containing one dozen and individually packaged when desired. Write today.




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GRAVES HEAVY DUTY BUMPER HITCH

Wrap around Bumper
Bed Brace
Fender Guard
Inset Hitch
Dust Shield
Step



Comes with holes drilled to fit your pick up. Ruggedly built yet adds Beauty to your pickup.

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Insist on CIRCO Since 1923

**METAL CLEANING EQUIPMENT
DEGREASING SOLVENTS**

- VAPOR DEGREASERS
- METAL PARTS WASHERS
- STEAM CLEANERS

PER-SOLV (Perchloroethylene) CIRCO-SOLV (Trichloroethylene)

Manufactured by
TOPPER EQUIPMENT COMPANY
Clark Township (Rahway) New Jersey

AUTOMOTIVE SALES AGENTS
... many excellent territories available!

Sturdy portable hack saw attachment for electric hand drill. Multi-purpose tool with multi-sales appeal.

EASILY SAWS METAL, WOOD and PLASTIC

Successful sales agents wanted for protected territories. Write for complete information.



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Is Higher Than

That of Any Other

MONTHLY

AUTOMOTIVE

SERVICE

MAGAZINE



Now! Complete Line of **Snugl**
WHEEL BALANCING WEIGHTS
 for **TRUCKS** and **BUSSES**



STANDARD OF THE TRADE

Snugl Heavy Duty Truck Weights are especially designed to give

- EASIER APPLICATION
- BETTER FIT
- BETTER BALANCE

The exclusive Dove Tailed Steel Spring Clip holds weight firmly to rim with a Bull Dog grip . . . the beveled edges prevent clip from gouging tire.

When you buy Snugl you can be sure of getting the finest Wheel Balancing Weights on the market . . . designed right and made right to give better balance and better fit. The name Snugl (Registered Trade Mark) on every weight is your guarantee of complete satisfaction.

FOR PASSENGER CARS

Write for illustrated catalog sheets of Snugl Wheel Balancing Weights for Passenger Cars, Trucks and Buses . . . also name of your nearest Jobber.



Special Thin K & L Flange Weight for Passenger Cars

Regular K & L Weight for Passenger Cars

WESTERN AUTO PARTS
 MANUFACTURERS EXCLUSIVELY

MAIN OFFICE AND FACTORY
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WEST COAST FACTORY
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NEW!
AUTOMATIC SELF-CLOSING FLOOR-DOOR



REMOVE DANGEROUS EXHAUST FUMES SAFELY QUICKLY COMPLETELY

CAR-MON
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UNDER-FLOOR VENTILATING SYSTEMS now improved with the automatic door-closing feature! Prevents bruising of tires and accidental damage to open doors; protects workers and customers from tripping or falling. Foolproof, self-acting trip securely closes floor panel when tube is retracted.

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 4554 Broadway Chicago 40, Illinois

"Knock-Out" Valve Refacer



MODEL K403

SEE YOUR AUTHORIZED K. O. LEE DISTRIBUTOR OR WRITE FOR COMPLETE LITERATURE

features:

- Grinds wet or dry
- Valve stem range 1/4" to 11/16" with three collets
- Five-inch grinding wheel
- Valve head capacity up to 3 1/2", within valve stem range
- V-type table ways requiring no adjustment for wear
- Zero to 90° positive-stop face angle settings—with minus 1° for any angle
- Collet-type work head with controlled rpm's
- Concealed coolant system
- Right-hand table traverse arm
- Precision built for accuracy!

K. O. LEE COMPANY, ABERDEEN, SOUTH DAKOTA
 WET VALVE REFACERS • VALVE SEAT GRINDER SETS • VALVE SEAT INSERTS
 RESEATER SETS • ROD ALIGNERS • STUD WRENCHES • DRILLS • SANDERS
 POLISHERS • HAND GRINDER SETS • REAMER DRIVES • A.C. WELDERS

for more exhaust system sales . . .

Here's a Combination That Can't Be Beaten!

• A GROWING PROFITABLE MARKET
 With 30 million cars on the road needing mufflers replaced your profit opportunities as a PORTER AUTHORIZED DEALER are greater than ever. Are you going to share in this \$240 million market? You will, if you are a Porter Dealer!

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 Unlike ordinary stock mufflers, Porters allow greater power, faster pick-up, higher top speeds, and improved engine efficiency. Because Porter Exhaust Systems cut harmful back pressure up to 71%, you can offer your customers gas-savings up to 17%, and 33% more power from their present cars! And to top it off, your customers get the finest quality mufflers with Porter.

A NEW DEALER-DISTRIBUTION POLICY
 Right now, PORTER offers carefully selected dealers more profit-making support than ever before. Extensive dealer helps, positive dealer identification, powerful merchandising displays, effective sales literature, and aggressive consumer advertising. A sensible discount system brings you real profits.

Write today for full information and your free Porter Catalog. Ask for Kit MA3.



PORTER STEEL-PACK MUFFLER
 "Straight-Through" type. Lasts 2 to 5 times longer than ordinary mufflers

PORTER HOLLYWOOD MUFFLER
 "Echo Chamber" type. All-new design



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*The right 3M adhesive
helps us stop expensive
do-overs!* says Missouri auto refinisher.



No wonder 3M Adhesives are tops with Art Meyer, Meyer Chevrolet Co., St. Louis, Mo. When he got fed up with rainy day water-leak "jam-ups" he called on his 3M Representative for help. Following the 3M System of Dust and Water Leak Repair, the 3M Representative and Mr. Meyer licked the problem of adhesive repair do-overs.

Mr. Meyer writes: "Whenever water leak problems develop, loading our shop with adhesive repair do-overs, we call in the 3M Representative who sug-

gests the right adhesive to do the job right! Thanks to your representative, 3M Adhesives and the 3M System of Dust and Water Leak Repair we have licked this problem of adhesive repair do-overs.

"I want to say that you are absolutely right when you say that you need the right adhesive to do the job right the first time. In our shop we have adhesive jobs involving metal, glass, rubber, fabric, etc. Each of these jobs requires a different treatment and we find that we save time, work and money by keeping 3M Weatherstrip Adhesive, 3M Trim Cement, 3M Autobody Sealer and SCOTCH-Calk always on hand to do the job right the first time." The 3M Representative in *your* area can help you with your adhesive repair problems, too! Ask him about the 3M System of Dust and Water Leak Repairs . . . mail the coupon today!

THE RIGHT START FOR A PERFECT FINISH

"SCOTCH" MASKING PRODUCTS work together to give you perfect, trouble-free masking every time.

"3M" ABRASIVES stay sharp longer, sand easier—completely outperform all others. Made for hand or machine, wet or dry sanding.

"3M" ADHESIVES are used on top automotive production lines. Stock and use these specialized adhesives for one-time, one-stop repairs.

OUR SANDING TOOLS save time, save work, increase efficiency. Order and use the "3M" Back-Up Pad Assembly, "3M" Disc Feather-Edger and the "3M" Cone Mandrel.



MINNESOTA MINING & MFG. CO. Dept. MA-93, St. Paul 6, Minnesota

YES! I want to talk to a 3M Representative about the 3M System of Dust and Water Leak Repairs.

Name

Company

Address

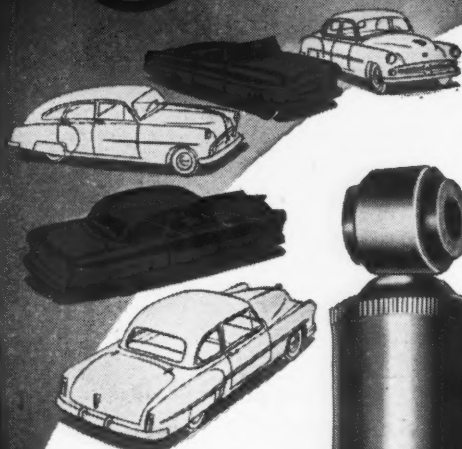
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Made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "Scotch" Brand Pressure-Sensitive Tapes, "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives. General Export: 122 E. 42nd St., New York 17, N.Y. In Canada: London, Ont., Can.



Cash in on this proven profit maker

MONROE'S 30-DAY FREE RIDE PLAN!



2 out of 5
need
Shock
Absorbers

Shock Absorbers must be replaced on modern cars. Soft, whippy springs require "shocks" to give smooth, safe ride. Many states now require regular "shock" inspection for safety. Now 24,000,000 cars equipped with direct-action shock absorbers. Millions more need Monroe easy-to-install "Conversion" Sets. Actual tests show you can sell 2 out of every 5 customers.



MONRO-MATIC

SHOCK ABSORBERS

- Thirty-day guarantee of customer satisfaction
- Monro-Matics—the sales leader that makes cars ride better than new
- Small stock serves 95 per cent of all cars
- Installation in as little as 10 minutes per shock

The new Monroe 30-Day Free Ride Plan provides the greatest profit opportunity ever offered the industry. Guarantee makes sales easy for every car that needs shocks replaced—two out of every five cars you service.

The sensational new Monro-Matic shock absorber gives you a "leader" that makes cars ride better than new. Gives automatic adjustment for all loads and roads. Lets you sell complete sets for more than \$10.00 profit. Dealers now using this plan are selling up to 3 and 4 sets a week. Get started with this money-making plan now. See your jobber or write today.

Order this display, today! Package holds balanced set of 4 shocks to fit practically every owner's car.



MONROE AUTO EQUIPMENT CO.

Monroe, Mich. — World's Largest Maker of Ride Control Products

Years Ahead 15 YEARS AGO...still years ahead TODAY

...Still nothing like it for

MORE POWER for Car Owners and MORE PROFITPOWER for YOU!

DOUBLE-LIFE

Principle

Here's the MOST CONCLUSIVE PROOF OF ALL...

that *You Profit ALL-WAYS with RAMCO*

DOUBLE-LIFE is the cornerstone principle that puts you so far ahead in profitpower when you recommend and install Ramco 10-Up rings. Double-Life enables you to get Quick Seating without excessive pressures! You rely on stabilization...not inner-ring pressures on the steel or chrome!

You get all the benefits of All-Purpose Spiro-Seal because of PATENTED RAMCO DOUBLE-LIFE. You never have to worry about selecting the right combination. The one Spiro-Seal ring with inner-ring and full-fledged oil ring does all three jobs...re-bore...usual re-rings...or tough re-rings...and does them all efficiently. See your Ramco Jobber and get the complete story on the original and yet *un-duplicated* RAMCO DOUBLE-LIFE PRINCIPLE...or write Ramsey Corporation, St. Louis 8, Missouri.



1st LIFE... ONLY CAST-IRON RING RECEIVES INNER-RING CONTACT



2nd LIFE... BOTH CAST-IRON AND SPIRO-SEAL RING ARE CONTACTED by inner-ring thus reducing the total wall pressure while increasing area of stabilization.



RAMCO *Quickest Seating* **Piston Rings**

for Chrome call for

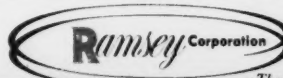
RAMCROME

Chrome Plated
10 up

for Regular call for

RAMCO 10 up

The ONLY TWO Ring Sets with RAMCO NO GAP Spiro-Seal Rings



St. Louis 8, Missouri,
A subsidiary of
Thompson Products, Inc.

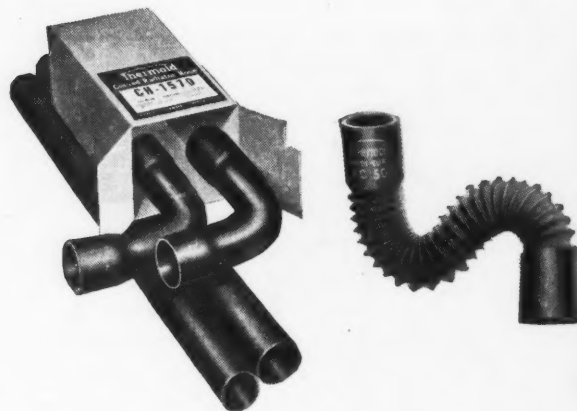


You wouldn't pour good anti-freeze down the drain...

...so don't add it to the radiator until you know all hoses and connections don't leak.

When radiator hose looks suspicious, replace it with genuine Thermoid—the hose that gives dependable service over an extra long life. From tube to cover, Thermoid Radiator Hose is designed to withstand the demands of today's increased engine temperatures and flexible motor mountings.

Your jobber can supply Thermoid Hose of any type—for air ... water ... car heater ... and radiator.



Thermoid

Thermoid Company • Trenton, New Jersey

Brake Linings • Fan Belts • Radiator Hose • Hydraulic Brake Parts and Fluid • Car Mats • Clutch Facings • Thermoid Precision Process Equipment.